DOCUMENT RESUME

ED 144 343 FL 008 764

TITLE	A Proposed Approach to Implement Bilingual Education Programs. Research and Synthesis of Philosophical, Theoretical and Practical Implications.
INSTITUTION	National Puerto Rican Development and Training Inst., Inc., New York, N.Y.
SPONS AGENCY	Office of Economic Opportunity, Washington, D.C.
PUB DATE	73
GRANT	20058
NOTE	158p.; Not available in hard copy due to marginal legibility of original document.
EDRS PRICE	MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS	Biculturalism; *Bilingual Education; Bilingualism; Bilingual Schools; Educational Policy; *Educational Research; Language Development; Language Instruction; Language of Instruction; *Language Programs; *Models; *Program Development; *Research Design; Second Language Learning

ABSTRACT

A conceptual framework for research in bilingual education programs and a set of criteria for implementing such research are proposed. The approach to experimental research in bilingual education is based on two assumptions: (1) as soon as a model is implemented in two different sites, there will be variation in the model; and (2) any effective bilingual education model includes components that entail unplanned or natural variation, e.g., meaningful involvement of people other than the model planners, such as parents and teachers, in the development of the program. The model presented relies on implementation in two or more sites for variation. The conceptual basis presented is a set of assumptions, theories and research findings in the area of general education, learning, language and culture. The model for bilingual education research proposed here was developed by a research team using three basic sources of information: (1) interviews with thirty-three experts in the areas of language development, anthropology, psycholinguistics, psychology, educational administration, political science, sociology, and other disciplines; (2) more than 250 pieces of relevant literature; and (3) detailed content analyses of a random stratified sample of 23 Title VII bilingual education program proposals. (CLK)

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A PROPOSED APPROACH TO IMPLEMENT BILINGUAL EDUCATION PROGRAMS

RESEARCH AND SYNTHESIS OF PHILOSOPHICAL, THEORETICAL AND PRACTICAL IMPLICATIONS

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EXPERIMENTAL RESEARCH DIVISION
OFFICE OF ECONOMIC OPPORTUNITY
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20506

PREPARED BY:

NATIONAL PUERTO RICAN DEVELOPMENT AND TRAINING INSTITUTE, INC.
2150 THIRD AVENUE
NEW YORK, NEW YORK 10035

A003764

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"The research reported herein was performed pursuant to a grant with the Office of Economic Opportunity, Washington, D.C. 20506. The opinions expressed herein are those of the author and should not be construed as representing the opinions or policy of any agency of the United States Government." grant no. 20058

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INTRODUCTION

The past three years have seen dramatic growth in the level of activity in the field of bilingual education. We cannot attribute this welcome development to any single causal factor - any more, for example, than one could say that the enactment of the E.S.E.A. of 1965 was the product entirely of the late President Johnson's singular savvy in the workings of the national legislature. Instead, as has happened before with a number of suddenly "revealed problems," there was a confluence of many factors - and intersection of grim discoveries, of pressures and hopes and bilingual education was abruptly, even if belatedly, off the launching pad. Because of sad experiences with the abrupt launching of other educational and social reform efforts in recent years, we are greatly concerned lest the bilingual education effort experience the same treacherous orbital trip that has vitiated other efforts, and consumed the energies and frustrated the hopes of so many victims, educational reformers and other concerned citizens.

Let it be clear that no pleasure or satisfaction is taken in employing such a rhetorical description of the beginnings of intensive effort in bilingual education. To the contrary, the choice of language is purposeful and appropriate. We seriously contend that the crisis-crash program syndrome which surrounded the birth of the bilingual education effort is in itself a serious reason for concern about its future. It is seven years after the passage of the E.S.E.A., and there is now enough experience with the beginnings of education reform efforts to afford some valuable lessons. And this we think is one of them. Too often in these years, the sudden

"discovery" of a problem whose time had come has prompted a peremptory demand for the immediate initiation of programmatic activity without allowing sufficient time for planning, reflection or even the careful selection of key personnel who could be expected to give direction to the effort. The problems, far from being new, had almost invariably been with us for a long time but had finally become so aggravated as to require attention. And they were usually problems of such seriousness and complexity, that while the need for attention was obvious, they were also likely to defy the quick fix solutions that were so often projected in proposals hastily written by seriously concerned people.

Thus, in the first place, the crisis-crash program syndrome tended strongly to distort or oversimplify the problems, and encouraged unrealistic estimates of the time and effort that would be required seriously to contend with them. And other consequences have followed. Proposers predict vast accomplishments in insufficient time frames; disproportionate energies are invested in quasi-administrative work to keep the proposers, somehow, in contention for the award of supporting funds; and frequently, less than penetrating descriptions or even fraudulent claims are set forth in the name of evaluation.

Developing powerful programs in bilingual education is a formidable task. In some measure, the earliest efforts have fallen prey to some of the troubles mentioned above, and not surprisingly, as disappointment comes fast, and the field's newness has to an extent diminished, the opportunity to undertake new efforts is now in some jeopardy. Speaking frankly, it is extremely important that the next efforts succeed.

Realizing this, we have employed what we believe is an extraordinary set of investigative procedures for the purpose of informing ourselves prior

to commiting ourselves to a course of action. (These procedures are described in more detail both later in the text and in Appendix B.) What we have learned through following these procedures causes us to question the wisdom of propósing a so-called Planned Variation model bilingual program - essentially for two reasons. First, it seems very clear that populations and the more general ecology of communities present such variety as to preclude the general efficacy of any single, specific program model. And second, our familiarity with the evaluation of the Planned Variable Headstart program has indicated other serious problems with that approach. The authors state very directly that they were unable to construct a really "experimental situation," due in the first place to the impossibility of having a randomized collection of participant sites. There were also very serious questions as to assuring the "integrity" of the various models from site to site. And finally, as one of the major conclusions, the authors state that, for all the relative sophistication of the research design and the confidence they have in the quality of their data, it is not possible to make a strong, consistent case for any of the eleven Planned Variation models over any of the others. We have also learned through conversations with those who carried out this evaluation effort that there is enough concern now about the present construal of the Planned Variation approach as to have been a factor in the scheduling of a major conference at the Brookings Institute to examine and to rethink its potential.

What we do propose is a carefully developed conceptual framework and a set of criteria for implementation.

The proposed approach to experimental research in bilingual education is based on two assumptions:

1. As soon as a model is implemented in two different sites, there will be variation in the model.

2. Any effective bilingual education model includes components that entail unplanned or natural variation, e.g. meaningful involvement of people other than the model planners, such as parents and teachers, in the development of the program.

Given these conditions, we have developed a model that relies on implementation in two or more sites for variation. The natural variation that occurs as the programs develop will be carefully documented, along with a demographic description of the site and an assessment of the success (or failure) of each program. The documentation will serve to strengthen and further the initial implementation criteria and enforce higher possibility of success for a subsequent implementation of the model.

The model consists of two parts: (a) a conceptual theoretical basis and (b) implementation criteria. The conceptual basis is a set of assumptions, theories and research findings in the area of general education, learning, language and culture. This body of knowledge allows us to generate program implementation criteria that is necessary to the success of any bilingual education program.

As indicated earlier, our decision not to propose a Planned Variation model was strongly influenced by our investigative procedures which entailed an interview schedule with some 30-plus experts in various related fields, a very extensive review of the available literature, and perhaps most originally, a detailed content analysis of some 20-plus Title VII Bilingual Education Program Proposals. Even before we completed our investigative procedures, it began to be apparent that while our especial concern is the development of powerful bilingual education programs, it would also be absolutely necessary to attempt to identify some of the most general conditions

common to schools that seem most significantly to affect the behavior of teachers and children, and to preclude both the success of individual innovations and the positive utilization of the educational resources that are found in the school's immediate community. Our reasons for doing this were:

1. Experience indicates the extreme difficulty of grafting on or superimposing a particular innovation, and making it affect the general institutional status-quo. (In this context, even a bilingual education program is a particular effort within the general social and "political" context of a school.)

Finally, we have set forth what appears to us to be some of the most powerful of these conditions, and in a series of brief protocols, that are congruent with our criteria for a bilingual education program, suggest how we would attempt to influence them.

LEARNING

Assumption on Cognitive Capacity

There is an increasing recognition and acceptance of the theoretical position that cognitive capacity is universal among human beings. Man is equipped from birth with the apparatus to perceive and to conceive just as he is endowed with the apparatus to speak and to taste. The difference in cognitive competence resulting from the later development is rooted not in genes and chromosomes but in the different 'amplifiers' embedded in one's culture. The variation in conceptual growth due to social class, ethnic background, and socialization pattern can certainly be reduced by adequate educational processes. This assumption bears undeniable significance on bilingual education, especially in the domain of conceptual development.

Rationales

The five points of recommendation given below are generated from the theoretical discussions which follow. Efforts are made to relate the theories of conceptual development to the empirical data obtained from the interview, literature, and proposal survey sources.

1. The academic areas responsible for concept development should be exposed to children in both languages while the proportion in the use of the two languages should be tailored to their language proficiency.
2. The development of language and conceptual skills should be integrated rather than segregated in most learning activities and processes, maximizing their growth through mutual reinforcement.

3. The teaching strategies and focuses should permit the carrying through from stimulus-response type of associative learning to transformational type of conceptual learning. The acquisition of the latter will be the requisite for achieving accomplishment in most academic areas.
4. The instructional method and curriculum should place equal emphasis on the knowledge-getting process as well as learning product. Knowledge consists of the knowing of the process and the consequence.
5. The desire to learn is stimulated and strengthened not by the dispensing of contingent reinforcement but by recognition of the intrinsic needs to discover and explore, to evaluate and manipulate the environment.

An expansion of these recommendations follows, in the same order of presentation:

1. Bilingual Approach v.s. Monolingual Approach. Studies in cognitive growth have pointed out that development in conceptual processes depends to some extent on language proficiency. Sensorimotor representation or nonverbal concepts are cognitive activities characterized by the conceptual development in the earlier stage. For a normal school-age child, the language codes become the most useful tools to interpret experience or operate conceptual processes. The bilingual studies have demonstrated that the bilingual students if taught in their dominant language were found to proceed much faster in most academic areas. As in most testing programs involving a bilingual population, language barrier was usually reported as one of the major causes for the academic failure of the bilingual students attending monolingual schools.

Indeed, for those living in lower-class ghettos where the home-school relationship is already fragile, the discontinuation of the years of experience and potential developed at home upon entering the monolingual setting will definitely have negative effects on their academic development. It has been shown with evidence that the retardation in the academic learning was remarkably greater in bilingual children as compared with the monolinguals. Even in the Canadian total immersion project which involves a middle-class population, the results concerning cognitive development were not very convincing, especially those based on the home-used language. And that this discrepancy in abilities in home-used language found in the project will be magnified with continuation to the upper grade levels can be readily predicted. This does not imply, however, the learning of the second language would hamper intellectual growth. On the contrary, the introduction of the two languages in concept learning, as strongly supported by the interview and literature sources, does not harm intellectual development but helps to create an integrated personality. To capitalize on the bilingual abilities of the child for both language and cognitive development is a fundamental requirement in bilingual education.

2. Conceptual Development. The above discussion must be followed by the understanding that language and conceptual development become increasingly interdependent in a school-age child. A number of research findings reported that the English as a second language (ESL) or Spanish as a second language (SSL) programs established to improve certain language aspects have met with little success. The simple fact for their failure is that a language cannot be learned for its own sake. The proficiency of a language is a function of the real, combined experience of its meaning, function, and structure.

Some theorists even propose that the acquisition of word meaning and concepts are basic to language development. Within this framework, it is reasonable to assume that language learning cannot be completely divorced from concept development. The position that thought and language, though distinguishable at times, are inseparable elements of a compound has been shared by many prominent scholars. To base language learning on the analytical feature of language structure can hardly accommodate the highly synthetical and creative nature of thought processes. The mechanical drill on certain language aspects not only neglects the essential aspect of language learning but also violates the operational law of conceptual function. It cripples the cognitive flexibility and ideational fluency. If this very concept is disregarded, bilingual education will continue to fail.

3. Perceptual Abilities v.s. Conceptual Abilities. Based on the interview and literature sources, two theoretical viewpoints have been fairly well ascertained. First, there are two distinct levels of conceptual abilities. Although they are stated in many different ways such as perceptual activity v.s. conceptual activity, stimulus-response associative learning v.s. transformational conceptual learning, or intuitive representation v.s. transformational conceptual learning, or intuitive representation v.s. logical representation; they actually refer to the same two phenomena-stimulus labelling, rote learning, subjective perception and denotative reading as contrast with transformation of stimuli, concept formation, logical thinking, and connotative reading. Secondly, the transition of one level of conceptual ability to another is manifested rapidly between the ages of 4 through 9. These viewpoints are held by most cognitive and developmental psychologists. Revealed from the experimental studies was also the fact that the lower-class children

achieved a good mastery of the perceptual abilities but fell short on the conceptual abilities as compared with the middle-class counterparts. To explain this fact a host of hypotheses have been proposed. Among those, the hypothesis on cultural deprivation, cultural conflict theory, lack of motivation, or negative self-concept are the common ones. Very few have proposed to analyze the problem from the standpoint of the learners and their conceptual functioning. To proceed from the level of perceptual abilities to conceptual abilities is a qualitative change in the process of development. This change cannot be accomplished through the usual classroom learning whose function is to have students accumulate factual knowledge in an additive fashion. This change can be realized only by unlocking the students' mind and letting it explore and discover the principles by itself. It demands the teacher's concern and understanding of the motivational and cognitive structure of the individuals and his/her devoting efforts to accommodate the learning process with specific strategies and focuses. Bilingual education is needed not only to break the language barrier but also the barrier of conceptual development in the learner.

4. Knowledge-getting Process v.s. Learning Product. This issue has almost been made explicit in the above section. A number of conceptual abilities discussed above refer primarily to the knowledge of the process rather than the consequence of the units of study. Any educational programs viewing the learning product, the performance, or the behavioral response as the sole form of human knowledge are going to fail simply because knowledge and learning of a given subject matter imply both processes and products. This misconception derived from the behavioral psychologist and hard-minded psychometrician has imposed difficulty in the analysis and evaluation of the

process of learning. Emphasis on the learning product not only create confusion and failure to differentiate systematic or logical knowledge from random or intuitive knowledge but also throws away the total value of knowledge-getting process. The knowing of the process as the essence of knowledge is best illustrated in the operation to solve a mathematical problem, or write a computer program. Research conducted in teaching mathematics to children with emphasis on problem-solving processes found greater improvement and motivation in math achievement. A number of objective-type tests constructed in this direction have provided evidence that the process of certain conceptual activities are also measurable. The knowledge-getting process is not only a tangible and "measurable" entity, but also a piece of useful knowledge to be acquired. The failure to recognize this will also be a failure to solve the problem of conceptual learning. The clarification of this issue has tremendous implications for curriculum planning and teacher training programs in the domain of cognitive development.

5. Motivation. From the interviews, two outstanding features considered important to academic success were pinpointed: (1) learning through self-correction, and (2) functional use of knowledge. These two features are in fact coherent to the intrinsic needs of a learner. The needs to achieve self-improvement or to manipulate the environment amount to the motivational concept of 'competence' as discussed by R. White. The striving effort to improve and control one's own abilities is not contingent on certain external reinforcements, but based upon the desire to succeed and accomplish. However, motivation is a very complicated, multidimensional construct. A motivating force to achieve is not simply a function of a basic need, but also the expectation, the feeling, the experience, and the attitude of the learner. The consequence of a learning task is not evaluated by some objective standards,

nor by the person who control the reinforcement system. Whether it is a success or failure, experience relies much upon the perception of the learner and the perception between him and the reality. To control the contingencies of reinforcement as a means of learning is to impose arbitrary behavioral laws for the learners to follow and to restrict the alternatives and the flexibilities through which they can actualize their desires. During a learning process, more channels and opportunities should be opened to guarantee ways for the complex desires to work on. Providing activities aimed at self-correction, or to try out the acquired knowledge is to have the learner react to himself or interact with the environment. These are essential alternatives or channels toward the achievement of success or accomplishment. The shift from looking outside to inside of the learner for the motivation to learn is imperative for providing encompassing views or a more complete theoretical base to account for the cognitive development of the learner.

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CONCEPTUAL MODEL

LANGUAGE

Language Goals

The choice of educational goals in language development depends to a large extent on the answer to the question: Is the ability to speak more than one language well important in the United States? As everyone agrees that English is necessary to function in this country, the question becomes: Is it important to maintain another language in the United States?

First, knowledge of more than one language has always been valued, as evidenced by the existence of foreign language programs in most of the high schools and colleges in the country. The choice of which languages are valued seems to depend on changing social needs and values. When the space race with Russia began with the launching of the first Sputnik, Russian language programs flourished; they are now on the decline: The great Western literatures and philosophies spawned programs in French, Spanish and German. And a change in racial relations has resulted in programs in Swahili. The point is that language needs and values are a function of social conditions which change within a generation. The common denominator is that knowledge of a language is an asset to benefit from the activities and accomplishments of people who speak a language other than English.

There are almost three million children of primary school age in the United States who already possess competence in another language. It is wasteful to remain oblivious to conditions that cause language loss in these children. It would be beneficial to foster the maintenance and development of this linguistic resource. Education can contribute to this end.

The language goals of the proposed bilingual education model are:

1. That the child develop competence in his native language.
2. That the child develop competence in English.

In light of these general goals and the conceptual framework discussed below, the operational objectives in language are:

A. To insure that both English and the child's native language have equal status in the school.

B. To provide the child the opportunity for an equal amount of exposure to both languages.

CONCEPTUAL FRAMEWORK

What factors influence language learning?

A. Capacity

The capacity to acquire a language is a universal human characteristic which children start exercising around the age of two. Though there are some differences in onset of language and certainly in the non-structural aspects of language such as style and vocabulary range, most children master the basic structure of the language to which they are exposed by age five. There seems to be no correlation at all between a child's ability to acquire the structure of a language and his level of "intelligence"; even morons learn to speak.

The categorization of some children as non-lingual or as inferior speakers of a language has nothing to do with their language competence, but with judgments on the social acceptability of their language. Linguists are in unanimous agreement that all languages and dialects are equally able to

express logical thought -- if the thought is there, it can be expressed. A child who speaks a "mixed" language such as Spanglish or a non-standard dialect such as Pocho or Black English, has the same structural language capacity as one who speaks a "pure" or a standard dialect.

If children are exposed to two languages simultaneously, they can learn both just as easily as they learn one, provided the amount and quality of exposure to both are the same. Here again, the difference lies in the onset or rate of acquisition. In bilingual language acquisition, the amount of speech data the child has to process is double that of monolingual acquisition.

B. Age

Language development research indicates that the ability to learn languages deteriorates after puberty. Evidence includes the following: symptoms of traumatic aphasia that occur under age 13 are reversible, whereas those that occur after 13 are not. Non-deaf children of deaf parents who are exposed to a normal language environment at school age learn to speak within a year while deaf persons who regain their hearing after puberty never master a spoken language. Lateralization of brain function around the age of puberty seems to be the physical correlate of these phenomena. However, adults who learned more than one language as children learn a new language more easily than monolingual adults. Much more research is needed to say anything more specific about the processes involved.

It is clear, however, that foreign languages are learned best by young children -- the younger the better, provided the nature of their exposure to the language is adequate. There is little research evidence on age effects on the different language components. Pilot studies indicate

that pronunciation is learned faster and better by children under nine; gramma is learned faster and better by children age five to nine.

C. Cognitive Process.

A great deal of systematic native language acquisition research has been conducted in the last ten years, yielding several important insights about the process of children's acquisition of language.

1. The acquisition of language structure is an active and creative process -- children do not simply imitate adult speech; they structure it and form rules of their own which are refined gradually as they are able to organize more and more of the language. For example, the utterance "Daddy goed" is common in child speech, though no adult uses such a structure.

2. The acquisition of the structural aspects of language (syntax and phonology) have nothing to do with reinforcement of correct structure. It has been shown that parents react to the content and social acceptability, rather than to the grammatical structure of their children's utterances.

3. All children use grammatically incorrect structures during the language learning process. The child's use of incorrect structures is not an indicator of faulty learning nor of a need for educational intervention. It is a necessary condition in the learning process. To date no one has found a way to accelerate the rate at which children pass through these "error stages".

Courtney Cazden (1972) notes that "the first paradox in language acquisition is that while the attention of neither parent nor child is focused on language structure, that is what all children learn well. In Alice in Wonderland, the Duchess says at one point, 'And the moral of all that is -- take care of the sense, and the sounds will take care of themselves'... Take

care of the function and the structure will take care of itself."

4. The acquisition of vocabulary is a function of experience. For example, Eskimo children know around 16 different words for snow, while Puerto Rican children have several terms for "banana". This means that when assessing a child's language development, structural measures can be uniform across all groups of children, while vocabulary measures should be specific to the cultural experiences.

There is growing evidence that second language acquisition by young children proceeds like first language acquisition in all the above respects. Perhaps the most startling evidence is that children's second language errors in syntax do not reflect native language interference, as predicted by the widely accepted contrastive analysis (CA) hypothesis. The CA hypothesis assumes that language learning is habit formation. And where the first and second language differ, the old habit (using L1) will hinder the formation of the new habit (learning L2). Thus L2 errors are predicted by a systematic contrastive analysis of native and target language. This prediction has not been borne out by examination of available evidence on children's second language errors in syntax. Rather, the evidence indicates that children make the same kinds of errors in learning English as a second language as do children who learn English as their native language.

Habit theory advocates practice of language patterns to be learned, the immediate correction of errors so that those errors will not become ingrained habits, and reinforcement to aid in shaping the child's verbal behavior. Language acquisition research clearly shows that "bad habits don't stick", i.e.; that incorrect structures disappear from children's speech with no intervention whatever.

We can conclude then that the hab.t formation principles of reinforcement, repetition and negative transfer are questionable at least in describing structural language learning. This points to the need to re-examine current language teaching methodologies which are for the most part based on these principles, and to heed the Duchess and let structure take care of itself.

D. Learning Environment.

What are the optimal external conditions which activate the organizing process in language acquisition? Assuming that first and second language acquisition processes are similar, and given that first language learners are universally successful, let us look at first language learning conditions.

First language learners are exposed to "natural" language. They hear adults and other children conversing with each other and with them. It appears that sometimes the parents' speech takes on some special characteristics when they address the child. Cazden notes that "...rules for simplifying speech to children seem to be a part of general adult communicative competence". Second, parents often expand and extend the child's speech without making him repeat the correct structure. Third, and most significant here, "there is no deliberate sequencing of what the child hears or is asked to say, and no correction of his maturing syntax". A second language instruction in the classroom is usually quite different. There is deliberate sequencing of presentation of patterns. The child is corrected as often as errors in his speech occur; and during his second language class, he is separated from children who are native speakers of the language he is learning. Thus to a large extent, whatever the child acquires must be learned in the playground rather than in the language classroom.

Children listen to speech for at least a year, sometimes two or three years, before they talk. The listening condition is not one where input is merely auditory such as on a language lab tape. Usually the child's mother is referring to something concrete in the child's environment, such that the meaning of her utterances is obvious to the child. That is, what the mother says is usually redundant to what she is doing, and thus the child begins to make the connection between speech and its referents. There is some evidence that in a second language situation allowing the child to listen is much more effective in teaching than compelling him to speak right away. Some children prefer to wait before they start speaking, sometimes as long as a year; but they are listening and indeed learning.

In a bilingual situation, children seem to be very rigid about rules of language usage, i.e., when to use a certain language. These rules can be either person, place or situation rules. For example, a child observed by S. Erwin-Tripp had an outside-inside rule. He spoke the second language whenever he stepped outside the door of his home, and used only his native language inside the house.

There is some evidence that children who speak a "mixed" language do so because they have been exposed to adults who speak a mixed language. It is not that the child is not capable of separating two languages, but that the two languages were presented as one language.

E. Motivation

That motivation is "the most important variable in language learning" is the unanimous conclusion among experts and literature sources. This seems to be the result of two observations discussed above: (1) At least for children, the capacity or aptitude for learning a language is universal; it

does not predict differences in language performance, and (2) the universal success of children in learning how to speak without any planned instruction or reinforcement from the parents clearly indicates that formal language instruction is equally insignificant. What seems to count is that the children want to speak a language and that they be exposed to real communication situations.

There have been no systematic studies of the effects of specific motivational factors in language learning by children. However, it is not difficult to predict some of the factors involved.

There are several communication domains in a child's life -- his home, his neighborhood, the school, and the mass media. The child's perception of the status of a language in these domains, the relative weight of each domain, and his perceived success in communicating in a particular language all influence his attitude toward a language and his willingness to speak it.

A child will want to speak a language if:

1. The important people in his life speak it.
2. The important people in his life have a positive attitude toward it.
3. Activities interesting to him are conducted in that language.
4. The child experiences success in communicating in that language.

CONCEPTUAL MODEL

CULTURE AND SOCIETY

It is impossible to see the bilingual school, as well as any school outside of the culture and society in which it exists. In order to propose a model for bilingual education the relationship between this type of education and the existing American culture and society must be analyzed.

While in other societies the knowledge and usage of many languages is associated with having a good education, cultural and linguistic minorities in the U.S. A. have to struggle with the implications of the widespread opinion that all you need to speak in order to get along in the United States is English. Furthermore, people who insist on speaking the language of the mother country have been viewed with suspicion by some sectors of American society.

However, this has been a relatively recent occurence. Many parochial schools in the 19th and early 20th centuries had homogeneous ethnic composition. In these schools languages other than English were commonly used. There are still examples of this phenomenon through out the United States. Most of the original ethnic school disappeared as a result of the first World War when the United States was under threat of a foreign invasion. This threat was generalized to other foreign powers. The fear led to an emphasis of English as the sole means of oral expression and the repression of other languages. Even though this was resisted by some ethnic groups, it became a prevailing practice in the United States.

Since World War I European immigrants have encouraged their children to speak English and to forget their other language. "This is America, so speak English". Indeed the entrance into the middle-class for the immigrant since this time has, to a great extent, depended on his knowing English and

speaking it without a trace of an accent. We can say that a cultural value of the largest segment of American society was, and still is, English monolinguism.

The schools reflected this change in values. Classes in Latin, German, French, Spanish and even Russian were throughout the land, but these language classes were very much different from the language spoken by the ethnic minorities. The Spanish taught in the classroom was not the Spanish heard in the streets of East Los Angeles or East Harlem. It was a "cultivated" Spanish and academicSpanish. It was a Spanish that had the reading of novels and poems as its end product and not a means of carrying on the daily life of a people.

Segments of the wealthy class in the United States dealt differently with languages. Since they were very secure in their place in the American society they could afford to learn other languages. Some imported French governesses for their children because in these social groups languages had a very high status. And this was so for very functional reasons. The rich would have a reason throughout their life to use these languages.

Still a good part of American society continued to use languages other than English. By and large they were the people who were never a part of the white, affluent groups in the United States. Mostly they were the Chicano in the South West, the native Americans, the Puerto Ricans in the North East, the Portuguese in Mass., the French Canadians in Maine, the Cajuns in Louisiana, the Czechs and Germans in Texas, etc. Clearly then here was a contradiction between a monolinguistic cultural value on one hand and the reality of social plurality on the other.

This situation remained stable until the sixties when the United

States went through a period of great social change. What had become to be known as the racial or ethnic minorities demanded recognition of their distinctiveness. The leadership of these groups was saying "Look, we have been kept from enjoying the benefit of our citizenship. We have been kept as different entities. But now we will maintain our identify and still demand the full benefit of our citizenship."

Bilingual education in the United States began as a political phenomenon, not as a pedagogical advancement. It was at the start a political tool of these ethnic minorities that spoke languages other than English. It was a demand of the leadership of the poor, the victims of prejudice, the wretched of this part of the earth.

What then are the consequences of this situation? Here is a society that has English monolinguism as a predominant cultural value. It allows one type of immigrant into a social situation that makes it possible for them to accept English as their means of communication while at the same time because of social factors like racism or ethnic prejudice it locks another type of immigrant out of those social situations that reinforce the of English. While some immigrant groups have access to certain types of jobs that facilitate their learning and using English. Other immigrants are locked into an economic structure that is isolated and makes using English difficult. Some immigrants have become construction workers while others become migrant farmers. The Native American is locked into reservations and the Chicano becomes a squatter in his own land.

The very affluent classes continue to use languages as much as possible. For the majority of the population who attends schools, the learning of languages is relegated to one more school subject. But then

languages become academic and divorced from daily social interaction. As ethnic minorities begin to demand full participation in the society at large, bilingualism becomes one of their first political tools. Bilingual education is a goal that first becomes obvious to people that see the connection between the school and the political system. It begins to develop in a hostile environment not only because it is associated with ethnic groups that have low status in the society, though this is partly the case, but also, because there is a type of English speaking chauvinism in a good number of people in the society at large.

Bilingual education is also received with skepticism by the people whose children would most profit from it. It is common to hear a parent say, "Let them learn English at school, I will teach them Spanish at home." Why is this? Again, we must look at the interaction between culture and society. The people in the ethnic ghetto have not assimilated into the white middle-class, not because they have not wanted to assimilate, but because they have been kept out. Still they have the hope that their children will make it. Schools did not serve the majority of them but they hope that somehow it will serve their children. The parent sees the school as the door to affluence. In a sense they have bought the American dream. It soon becomes obvious that most of the children do not do well in the schools. In most cases the school is not the door to affluence. Why? Because schools are tied into other social institutions. In a society that has institutionalized racism, the children that go to the schools are already tracked into low paying jobs even before they enter the school. But the parents in many cases have not seen this relationship. They fail to see that in addition to the school many other things happen to the white child that makes getting a good job possible. In this

sense they also accept the myth of schools as avenues for self-improvement. Schools, while they may help individuals to climb, serve as a social agency for sorting and tracking children.

Another phenomenon becomes obvious and that phenomenon has been labelled, the affiliative nature of language by the social scientist. While the parent wants the child to learn English because this will open many doors, he still wants that child to remain like himself. Another way of saying this would be "yes, learn English, become somebody but remember you're still my child." This is why bilingual education is received with such enthusiasm once the initial skepticism is surpassed. When it becomes obvious that it is possible to learn English at the same time that one keeps and improves the knowledge of the native tongue, bilingual education becomes a preferred type of education.

This is only logical. People want their children to resemble them. At least they would like to speak to their children. Bilingual education makes this possible.

There also seems to be an interest in some sectors of the middle-class for bilingual education. This new development is tied to a new humanism and a genuine interest among people to break past prejudices for themselves and their children. This group has understood that language comes easiest to children and that the most efficient way to learn a new language is in a setting where it is used naturally. But for the amjority of society, this is not the norm.

The real task of the school in regards to children of the ethnic minorities is to join the processes of revindication being waged on many fronts. The school must have an advocacy role in correcting years of prejudice and

discrimination. It must question its role in perpetrating these prejudices and in fostering discrimination.

The Concept of Culture: Uses and Limitations

One of the most baffling concepts that must be analyzed in the building of this model is the concept of culture. This concept is highly controversial even among anthropologist because it so easily lends itself to confusion. How is culture different from society? Is culture artistic expression? If not, then why are artists often called cultural ambassadors? How is this concept different from ethnicity? Is it similar to race? What is the relationship between culture and folklore? What is the relationship between culture and history, and culture and civilization?

The concept of culture is especially relevant when considering bilingual education. It is generally accepted that the processes of schooling must be congruent with the total cultural experience of the child. Consequently, terms such as "culturally relevant curriculum" or "bicultural education" come into use. In order to understand these concepts and to see their relevance to education the very term culture must be analyzed.

The concept of culture has been developed by scholars throughout the history of the social sciences to explain the fact that one group of people is distinct from another. We see for instance that Africans are different from Europeans, that Indians and Orientals have different ways of seeing and doing things. We could easily explain these differences by saying that people have different civilizations, or that they are different because they have lived in a given environment and have had a given history. And indeed to some people this is all that culture means.

But this still does not answer questions about the essence of people, so some people make a list of every conceivable trait that can be

associated with a distinct group of people and call this culture. To some writers, culture is all the knowledge that a people have; their artistic expression, their language, beliefs, laws, customs, folklore, tec. And to a great extent this is partly true. Others go even further, to them culture comes from a collective consciousness, and an ideology. Others have narrowed this down to just a system of values. These social scientists would consider the concept of culture a more philosophical question.

If we start by asking why we have a need for the concept to begin with, it may shed some light on the whole matter. We have the concept of culture because some human beings have had a need to categorize what they see around them. Just as primitive man viewing his world saw a need for a categorizing and inventing words like animal, birds, eagles, and bald eagles, modern man has invented other categories. Culture and society are two of these. Culture is first and foremost an intellectual construct. The difficulties begin when this concept is applied. Primitive man had an easier time because animals were very different from plants. Culture is not that clear cut.

If the concept was first used to distinguish one distinct group from another, it is also usable to explain similarities. It is valid in a very broad sense to speak of European culture or an oriental culture. To a given observer and from a specific point of reference it may be important that the Italians and the French have things in common, or that the Chinese and the Japanese are alike in some things. Here we can see an analogy to language. For some kinds of analysis German and Danish are alike. For other kinds of analysis the Spanish spoken in Madrid and the Spanish spoken in Peru are two different things. But we must not forget that this concept also has great limitations. It is easy to use the concept to prove that a group is

homogeneous. This is clearly untrue even to the most casual observer. There are probably more differences within a culture than between cultures, especially when these reside side by side.

Another source of difficulty in applying the concept is that in order to differentiate one group from another it is easy to fall into list making. So social scientists and other observers point to specific traits of a given people. In given situations and within limitations this is a valid undertaking. A linguist can point to stress given to a vowel or omission of some sounds by a given group of people. The social scientist can also look at the behavior of a given group that has decided on its own to have some affinity with each other, and to see that they do have a constellation of traits that make them distinctive.

But what are these traits? In doing a cultural analysis all things are included. To determine what a group of people have in common among themselves and with other groups, you must include the totality of their experiences. To contrast one group of people with another group of people you must have a knowledge of the totality of their experiences. By experiences we are not merely referring to their history which indeed is an integral part of peoples culture. Culture is a model of behavior, a chart describing "the way the world is." Also it is a model <u>for</u> behavior, "the way the world should be".

As human beings we are concerned with the real and the ideal. So a culture is a set of symbols some of which are conceptual, material, or organizational, etc. These we call the real. But also it is a set of manners, expectations, values, etc., and this we call the ideal. While we say that in making a cultural analysis we must consider the totality of the experience of a group there are limitations that are imposed. Culture, when

applied to a group, means those things that give this group its character. This totality of experiences become recognizable as coherent to those within a group as well as to those outside the group.

Another difficulty in understanding is that cultures reside in people. It is difficult to set up boundaries where people are concerned because individuals move about and have great many individual experiences. If we return to our analogy of language, this limitation can be clarified. To a knowledgeable observer the difference between an individual that speaks Spanish with a Puerto Rican accent and another that speaks it with a Mexican accent is soon apparent. But not all Puerto Ricans, nor all Mexicans speak the same way. Within one family every child speaks quite differently. But again we must pose the question: Are we looking for what is similar or are we looking for what is different? Consequently, it is possible to group people using some cultural criterion and say that they form a distinct cultural group. It is also possible to say that each person has an individual culture, which is very similar to other people's in the group that he or she belongs to, but, that it is also slightly different.

Culturally relevant material as it is usually used refers to making references in the classroom to material that points out the uniqueness of a given ethnic group. The material refers to the folklore, the artistic expression or the history of this group. And indeed this is a good, if limited thing. Culturally relevant material should be understood in the light of the uniqueness of ethnic groups but this definition must be expanded to mean other things that contribute to this uniqueness. It should answer the two precepts of culture; (1) the way things are, (2) the way things should be. In New York City schools celebrate Puerto Rican Discovery Day. In areas with large concentration of Chicanos, the same thing happens on the 5th of May -

Mexico's Independence Day. On these days, schools have a special assembly program which focuses on the history, the arts, etc., of the Puerto Rican or of the Chicano. The cafeteria serves ethnic foods. At other times of the year posters on outstanding national figures or other commercially available materials are exhibited around the school. Some schools even go further and incorporate courses in the history of Puerto Rico or the history of Mexico. The teaching of these things is good and indeed should be encouraged. But this is a limited interpretation of the concept of culture. What seems to be forgotten is that culture is acquired by direct, frequent, varied participation and experience in all aspects of the life of a group of people. A very large part of this acquisition occurs outside of the learners' awareness. It follows that culture in this deep sense cannot be taught in culture classes.

Culture can only be "taught" or transmitted if special efforts are made to incorporate into the school, its curriculum, its staff and activities as many aspects as possible of the life of the cultural group to which the learner belongs. But if we see that culture is also what people have in common, culturally relevant material goes beyond those things that give a group their uniqueness to things that make groups of people similar to each other.

Probably what is oftentimes incorrectly labelled as bicultural education is an education that teaches a child who is a member of an ethnic minority, that there are different ways of doing things. I say incorrectly because the culture of the child in the ethnic ghetto includes people that are not like himself. The culture of New York Puerto Rican children tells them that in this world there are White Americans, Black Americans, Chinese, Dominicans, Haitians, Syrians, etc. The culture also tells them that they all have a position vis-a-vis the Puerto Rican. The Dominican is similar

in almost every way, the Black is also poor, the Syrians are very different, the Whites are more powerful.

In reality what is being taught to the child is that the United States of America's society, of which he is part has Puerto Ricans like himself but that it also has Haitians, American Blacks, American Whites, etc. Culture is the total "real" and the "ideal" experience of individuals that gets generalized so that they become distinctive characteristic of the group these individuals belong to. If this is so, the term bicultural is a contradiction in terms. This would suppose that culture is equivalent to language and that it can be acquired in the same way. There is no theoretical or empirical evidence that can support the concept.

If the learner is the focus of education we can say that the role of all educating mechanism should join to give a child a positive feeling regarding his/her affiliation to an ethnic group because this group has acquired equal status to other groups in the society at large. At the same time, there should be an effort to acquaint the learner with a knowledge of both the group to which the learner belongs as well as a knowledge of other groups that compose the larger society. If we focus on the school and its responsibility in the revindication of the ethnic minorities, the school has a responsibility for providing the experiences necessary to accomplish this. But, this cannot be labelled "bi-culturalism."

In a school one does not set out to teach culture, like one teaches geography. <u>One makes culture in the school</u>. One teaches facts about different groups of people. One can reinforce the process that was begun in the home or one can go counter to this process. But this process must not be confused with teaching bi-culturalism. One can teach children that the group they belong to is worthy in all its aspects and so are other groups, but this too

is also making culture.

Just as important, if not more important, is to emphasize that there is more variation within a given culture than there is between cultures. This is a concept that unfortunately gets lost in the revindication of the ethnic minorities. The political climate in the United States is such that it has become a necessity to emphasize the distinctives of a group of people while at the same time "they do not look all alike" and by extension "they do not all act alike" is being verbalized. This process must now be put into an operational human perspective.

The School and the Social Matrix

In the preceding section we dealt with the concept of culture. Now we must pay closer attention to the concept of society. Society is composed of institutions and groups that form what is known as a social matrix. A social matrix is the constellation of social institutions and social aggregates in a given society. It is called a matrix because not one of these institutions or aggregates exists by itself. All of these form a web that is in continuous interaction. The school is one of these institutions, and a very important one. It is tied to a given governmental system, to a form of taxation, to an economy, to other educational institutions, to a judicial system, to a bureaucracy, to a physical community made of buildings and roads and parks, etc. It responds to the needs of social aggregates such as families, ethnic groups, labor unions, social clubs. The crisscrossing, interacting nature of these social institutions or aggregates is what makes the schools what they are. In turn, the schools influence to a greater or lesser extent their functioning.

Obviously not all of these institutions or aggregates have the same

importance for the school. Some, like the family, are very close and their effect is immediately felt. Others may be of extreme importance but because they are further away the relationship is not as apparent.

An example of the complexity of this interaction is the relationship between the school and the economy. If the economy is capitalistic some people are going to be owners and others are going to be workers. The workers will staff the banking, the manufacturing, the agricultural, and the commercial sector. Workers have to be trained for each of these sectors and for the different strata within each of them. So one of the functions of the school will be to serve as a sorting mechanism. Yet the school is not the only sorting mechanism. The Army also does this. Unions, tradition, family, wealth, inheritance laws, racial prejudice, etc., will all play a big part. Sorting people into jobs is not the only function of the school. They must also teach to read and write, to socialize, etc.

As an example of this concept, let us see how a school in New York City is related to the religious institutions close to it. Public School 107 is situated on Lexington Avenue and 106 St., in New York City. It is adjacent to a Catholic Church and across the street from a Protestant Church. It is within four blocks of two other Protestant Churches, one other Catholic Church, three Pentacostal Churches and at least two Spiritualist Centers. The children that attend this school come from families that worship in all of these churches and Spiritualist Centers. One block away from the school, there is a shopping street and in many street corners there are Jehovah's Witnesses, that live nearby, selling their literature.

An analysis of this matrix can be more than just an academic exercise. For instance, it is usually assumed that Puerto Ricans are Roman

Catholics. Indeed a good number of them are. But a substantial number are also Protestants, Pentecostals, Spiritualists or Jehovah's Witnesses. This kind of knowledge is important in breaking a stereo-type of the religious affiliation among the Puerto Rican. But also the school would profit from this kind of knowledge if there was ever a need for passing on to the community some information regarding its educational programs, or in filling some other type of need the school may have. Let us now expand this social matrix and add another type of institution, in this case the social club.

Within the same four blocks area there are eight social clubs. Two of these are domino clubs and are attended almost exclusively by men. There are also three hometown clubs. A hometown club usually starts out as an organization for people that come from the same town in Puerto Rico, and they are usually frequented by the whole family. The rest are party clubs which is the local alternative to the inability to get a liquor license. Here also you will find ties to the school, because the people that go to the club have children and the majority of these go to P.S. 107. Much of what is going on in the school may be commented in these clubs. There is in these social clubs a tremendous potential for community involvement with the school, but up to now, P.S. 107 has not acknowledged their existence. Here in these clubs there are people with skills that the schools so badly need.

This social matrix includes a progressively larger number of social institutions. Both examples given here have dealt with institutions that are immediate to the school but a case can also be made for institutions that look more remote to the school. Let us take the example of one part of the commercial institution, that of the world of advertising.

The functioning of the economy of the U.S.A. is, to a large extent,

dependent on the people in this society buying consumer goods. Since there is a variety of consumer goods available, these must compete for the consumer through advertising campaigns. The learner and his family are on the receiving end of this chain. When they come into contact with the schools they bring with them the images and the values that advertising campaigns have fostered. As consumers they have certain kinds of toys, wear certain kinds of clothes, etc. If they do not have the money to purchase what they want, they bring these aspirations and concomittant feelings with them. The school consciously or unconsciously gets involved in this entire process. It then becomes the task of those involved in setting up programs, in teaching, in administering, etc., to deal with these relationships which have been labelled as social matrix in order to restore original meanings of education.

Whatever the social institutions or aggregates that get included in any analysis of social, it must be concluded that the school itself is only one more institution. This has led a number of researchers to state the the child's family, the community and the immediate society in which his life unfolds are more powerful educative influences than the school itself. Two corollaries flow from this. First, that the mutually-reinforcing relations between the school and this immediate society should be made as strong as possible. Second, that if the school cuts the child off from the influence of that immediate society it is cutting him away from his/her main source of educative strength and meaning.

The School and the Social Network

Closely tied to the concept of social matrix is the concept of social network. Social network can be defined as a natural chain that is

formed as individuals communicate with other individuals and these in turn communicate with still others. Let us give an example: A teacher working in East Los Angeles was having difficulties involving the family members of her students into the school activities. She had tried to communicate with them through notes written in English and in Spanish but these had very little effect. Rather than assuming that Chicano families were just not concerned about their children she looked for a method of communication that made sense in that community.

She observed what family members came to the school. She also observed who brought the children to school in the morning and who picked them up after school. Rather than trying to approach the families at random she began to work with these family members. She then asked these to involve others. The assumption behind this was that people relate better to people than to impersonal memos and that in convincing others one convinces oneself. She put this to a test and was not overly surprised when it worked.

Using this kind of tool it should be possible to involve in the schools a number of people that are presently not involved by using a "real" and human source of information dispersal and recruitment.

The social network can begin in the school. One could identify those family members that are already involved in school activities, or those family members that come to pick-up the children. If one proceeds to find out from this core group which of their friends or kin have children that are also in the school the second link in the network is identified. If this core group enlists these into the network, the network becomes a functional unit. This can proceed for a number of levels, though it must be cautioned that as the levels get farther away, the number of recruits begins to lessen.

Previously, we mentioned some social agencies or aggregates that function in the East Harlem section of New York City, let us return to this example and apply a social network components to it. Corresponding networks to those begun in the school can also be activated in the churches or in the social clubs. Of course, since one is working with a finite population these networks would at some point come together.

As suggested, this model of meaningful community recruitment must keep in mind that this is not a one-way channel that begins in the school or that is initiated by the school. This dynamic system will also involve people that will challenge the school and provide the school with a source of feedback, both of positive and negative nature.

To what ends should the school be involved in this type of activity? The school must inform the community and the families that make up this community about its activities and its educational efforts. It should receive from the school information regarding the needs of this community as well as receiving feedback. In every way possible, the school must become the center for educational leadership which is presented in other parts of this report.

The school should also be intimately tied to the efforts made by socially concerned groups in achieving social justice. It was said at the beginning that bilingual education began as a political phenomenon. The present challenge is to make pedagogical advancements as the political advancements continue to be made.

CONCEPTUAL MODEL

GENERAL EDUCATIONAL CONCERNS

No substantial and meaningful change in education can be proposed unless the general basis of education is analyzed and questioned not from the standpoint of schools and programs, but through delving into the human being (learner), society, processes and institutions (school being one of them). As initial statement for analysis, the following proposition is submitted: Education has entered into a cycle of indifference. The indifference is being usually stopped by crisis situations; but the present state of affairs usually allows only for random efforts aimed at compensating. One way of looking at the cycle is as follows:

(a) The learning approach, focusing on products in an overemphasized fashion, have created schools who are not very far from the common concept of a factory: standardized, mass production.

(b) In such standardized process, the role of the teacher, through decay (mostly attributed to indifference), have become that of quality control of products.

(c) Society has been asked for acceptance and support. To a large extent, society has trusted the institution to the point that passive acceptance has been generated.

(d) Society's needs as a consumer and school's interest in providing the needed products have created a situation where learners will be "successful" to the extent that they conform as raw material. This situation creates a pattern of differential negligence where those students

who cannot see their relationship with the consumer (for whatever reason) become psychological dropouts. This pattern moves in two opposite directions with the peculiarity of adding to each other rather than cancelling effects: student rejects school, school rejects student.

(e) This cycle, which schools are maintaining with an amazing (it is amazing in terms of effect, but there are logical explanations for the causes) degree of success will not allow any innovational program to work with the expected efficiency and to attain projected goals.

(f) Unless the implied basis of support of the cycle (indifference, maintenance and focus) are dealt with in a programmatic way, any new program (bilingual education being an example) will be eventually absorbed, rejected or nullified by the balancing elements of such cycle.

An alternate proposition ought to be submitted and expanded in order to generate the basis for a different kind of educational practice. Such a proposition is consistent with the two main issues that gave substance to the introduction to this work: Education must avoid entering into cyclic movements. Learning should be the main focus of all kind of activity. Learning is to be seen as a transformation of time into experience. In order to explain the nature of this transformation, energy (mostly affect), process (cognition) and tools (production of, or skills in use of, substance) need to be considered.

An expansion of the proposition follows:

(a) Teaching, as a process, is usually looked upon in absolute terms. If learning did not happen, still many educators will venture to say that teaching happened. To be fair to the situation, we must say that the purpose of teaching is learning and that they should be looked upon as an interaction. Another observation is that teaching is not equivalent to a classroom teacher, it includes this plus something else. This something else could be the learner himself (self-teacher), a situation, etc. The implication of the above interpretation is that the learner being the focus, an educational change must provide a program that will maximize the use of teachers available to him. To be a teacher does not imply then to have a certificate or a license, it is not the one who teaches per se, it is not the one who holds an official position, it is not one specific person. Instead, it must be seen as a set of elements in the learner's reality that will give meaning (internal) to the flow of time in such a way as to make her/him cope with life (society, himself, nature, etc.) What will then be the role of what we currently call a teacher? Answers to this question will be part of the proposed implementation model.

(b) The school, as an institution is equated with a center of learning. Even in the most desirable conditions, this is too much of a task for one institution. Another way of looking at the school is as a center of leadership for learning. All the connotations of what is a good leader are relevant here and the proposed model will explore some possibilities.

(c) A few processes generate a large array of products. To some extent the product can give some indication of the nature of the process, while by looking at the process the possible products can be predicted. The indication here is that there is an interrelationship between both. When there is a reversible reaction, there are many possible equilibrium situations. At one time or another, education has to deal with this issue. Some people have reduced the question to: should we produce meaning without substance, or substance without meaning? In this case, there is no awareness of the interaction between both process and tools (products). With this lack of awareness a great harm has been done to education. Others are aware, but concerned with "practicality" and "objectivity", work out on conditions that will maximize outcomes or products. The interaction can be expanded if we look at

possible interactions within processes.

(d) Processes and tools (this word should be equated with products or technology in this report, tools being preferred from the standpoint that one of the aspects of the model will be the transformation of products into tools for the learner) in an educational context, have to consider the energy of the learner. The most meaningful form of human energy is affect. When affectivity, processes and tools are put into a meaningful interaction situation, the efficiency of learning will be maximized. This statement, being significant in terms of the implications of the research which has been conducted will be refined and explained through proposed operational strategies.

(e) The school and the learner operate in a context that can be labelled as social reality. This reality is not a static one; it has had a past and there will be a tomorrow. There is no need to assume or accept that either the school should sit passively or powerless at the power of society, or that society stay indifferent at the drama schools are producing. Both school and society belong to the learner, the learner belongs to both. A challenging task for any educational program is to work on the dynamics of the learner, the school and the society in order to break an educational cycle which maintains success for some and failure for others.

(f) The assessment of the model should not be overlooked. A first question is assessment for what? In current evaluation terminology, people talk of summative and formative evaluations. Data obtained from the interviews conducted for this study and looking at the effect of summative evaluations on the improvement of educational programs will load the decision heavily towards formative assessment aimed at diagnosing, finding probable causes and proposing alternatives. A basic concern should be to know whether learning is or is not taking place and about the possible whys to whats. As part of the program, everybody has to be involved in obtaining, providing and analyzing information. Staff interaction needs to be maximized so that information is used continuously in an integrated fashion.

(g) Should we replicate? It depends upon what we thin about replicating. A process can be replicated, but when thinking in terms of specific learning activities, materials developed, etc., we need to be very cautious. Some things when replicated violate the concept of relevancy and worse, create indifference in the sense that it will put the teacher in the role of a consumer. The current experience with textbooks is enough evidence to see what happens in terms of the motivation of both student and teacher, added to "textbook

knowledge" as a product. Furthermore, the learner will again start to be a shadow in the planning of "education."

IMPLEMENTATION: PROPOSITIONS, CRITERIA, RATIONALE

The following list of propositions is the result of the analysis and synthesis of the information collected during the study. These propositions also follow the position of the research team with respect to the concept of models in the contextual framework of education. The set is aimed at generating dynamic bilingual education programs that will transform and become transformed as a result of their interaction with reality. The list is far from being exhaustive; it only suggests the beginnings of a process.

1. The two most important factors bearing on the effectiveness of bilingual schooling are the multi-faceted involvement (representation, participation) of the community and looking at the learner as the point of departure for any curriculum development, teacher training, etc.

2. There must be a concentrated effort to establish an image of the bilingual school as an educational institution where both English and the native language are taught. These schools also have to lose their image as corrective institutions for the socially different.

3. The bilingual school should be seen by the students and their families as educational institution that facilitates the learning of English to deal with the society at large, while maintaining and improving the ties between children, their families, and the social groups to which these belong.

4. The image of the school, the curriculum and everything else should reflect the fact that while bilinguism is a major concern of a

bilingual school, the other curriculum areas are of equal importance.

5. Both in terms of time and extension there is probably a minimum of bilingual schooling below which the returns diminish or disappear. Such schooling (even as is so with English-medium work) should continue as long as the child is in school. Within a single building, for example, all first grades, all second grades, etc., should be in the program. To involve but a single room at each grade level is to create a situation where bilinguism cannot flourish.

6. The bilingual school can be seen as an educational institution where the non-English speaking child acquires English through a natural process. By the same token, this type of school should be seen as a school where children whose native language is English acquire another language. This is especially appropriate for children of the ethnic minorities who have lost or never had the language of their foreparents.

7. In an ideal sense it is highly desirable to teach Spanish to the Anglos too. In practical terms, unless one can establish a full two-way bilingual school, to combine Anglos and Hispanos in the same classes will greatly weaken the Spanish-medium work. This is so because the unequal background of the two groups forces the class into the weak mold of foreign language instruction. The teacher cannot use Spanish with full strength and authenticity.

8. Academic curriculum should provide learning activities integrating content and cognitive operations. For example, concerning story-telling activities in Language Art programs, children should know the story

content, sequence, the theme, implication and the inference from the story.

9. The academic curriculum should provide opportunities for the children to perform problem-solving exercises. For example, from the science concept learning a child should not only learn the concept that 'things are heavier when wet' by viewing or touching it but also illustrate the concept through an experiment comparing the substance when it is dry and when wet on a scale. The important point is that he must know and show all the steps in order to solve the problem.

10. Academic curriculum should be appropriate to the child's level of cognitive development. It has been made apparent by the cognitive studies that some cognitive abilities will not emerge in certain age levels. For instance, the ability of extracting logical consistence from various objects or the concept of reversibility will not manifest until 6 or 7 years of age. The modes of cognitive representation also vary in different age levels, usually progressing from concrete to abstract, from simple to complicated.

11. A culture is acquired by direct, frequent, varied participation and experience in all aspects of the life of a group of people. A very large part of this acquisition occurs outside of the learner's awareness. It follows that culture in this deep sense cannot be taught in culture classes. Special efforts should be made to incorporate into school, its curriculum, its staff and activities as many aspects as possible of the life of the groups to which the learners' belong. Consequently, the entire curriculum should be designed to represent and reinforce the culture of the child.

12. The amount and quality of language experiences in school should take into consideration the language maintenance patterns of the community in the native language. The aim will be to maximize the use of bilingual instruction and peer group interaction to develop the equal fluency and literacy in both languages.

13. Mastery of reading and writing skills in the native language should precede the introduction of reading in the other language. Unless the child indicates an interest to read in the other language sooner, the reading should proceed from his exposure and oral ability in the native language.

14. Language in terms of structure or forms should not be taught as a subject. For example, English as a Second Language or Spanish as a Second Language programs focusing on the drill of certain language aspects should be eliminated.

15. Development of language competence (including student's dominant and non-dominant language) is achieved through engaging the children in a content activity conducted in the target language. For example, while the teacher is demonstrating the activity he can be discussing what is happening in simple language. He does not stop the demonstration to ask the child any questions, he simply talks, as if to himself, while he is performing the activity. The child can then repeat the activity without resorting to language. While he is busy figuring out how to do whatever he is doing, he hears the teacher, and perhaps other children talking about it. Soon enough, he will learn to associate certain vocabulary terms with familiar objects, and all the while he is listening, his language learning

strategies will be activated. Gradually, he will begin to speak. And when he does, no corrections will be necessary, as the errors will "iron themselves out" just as they did in first language acquisition.

16. The use of Spanish as a medium of instruction and other activities is a much more powerful and effective means of learning and teaching Spanish than studying and teaching it as a subject. Instruction in the language per se should be an ever-present concern of the teacher, but should be incidental to other more important activities.

17. Maximizing inter-relationships between subject matter: It has been stated before that using the language to teach something should receive more consideration than teaching language as a subject for its own sake. This automatically relates two formerly independent fields - language and subject matter learning. For example, the learner can become aware of certain algebraic phenomena like language equivalents of addition, permutations and combinations. Or, by focusing on melody, pitch or volume he will be working with acoustics. Acoustics can also be a topic in relation to the use of language in different social situations, emotional loading, connotations, etc. Some physiological correlates of human, animal sounds can be studied as part of what is traditionally called "biological sciences". These relationships can be extended and/or refined, making them also relevant to the learner, his immediate community, his culture, etc. In a similar fashion, any activity of any "subject matter" can be analyzed to see direct or indirect implications for and from other subject matter areas. In addition to the effects on the motivation of learner, a new awareness about knowledge will be developed.

18. There should be no such thing as a special "bilingual method"

of teaching. During Spanish-medium periods the teacher and pupils should act and work as if there were no other language in the world, and as if the child's entire education depended on that class. This means, essentially, that one language (or content in one language) should never be taught in terms of another language.

19. Presentation of the same subject matter content in two languages is unnecessary. This is nothing more than a disguised method of translation. Transfer does not depend on the redundant use of two languages as medium of instruction for the same concepts or skills, but on the proficiency in the use of the two languages. Furthermore, repetition only will serve to make the learning experience boring, thus creating indifference, passivity, withdrawal of attention, etc. A better approach is to provide parallel or complementary learning experiences that will acquaint the learner with the terminology used in both languages for the same subject matter. For example, in talking about insects, one language can be used to learn about the reproduction of insects while the other language is used as a vehicle for learning about the swamp ecology which includes insects.

20. The mastery of the content of the activity conducted in the non-dominant language initially should be independent of the child's competence in that language. For example, science activities that involve demonstration and manipulation of concrete objects such as growing plants or caring for animals.

21. The delicate question of dialectal variants of a language should be resolved by 1) using the child's language in the school (respecting it, studying it, writing it) while 2) moving steadily broad-mindedly, toward

adding another variant to the child's repertory - the universal variant of that language. The teacher, preferably, should command both the "dialect" and the "standard".

22. Learners should be exposed to two adult figures of authority - one dominant in English and one dominant in the other language. They should have a minimum level of understanding and preferably a speaking knowledge of other language.

23. It should be always kept in mind that while one can be bilingual at some stage of life, there can be a shift to monolinguism in the language that is associated with social, economic and political power.

24. The continuity of school and home is fostered by reproducing in the classroom environment selected aspects of the "natural environment" which can promote learning. This enables the child to see the relation between learning and his environment so that the school experience flows from the real experience of the child.

25. The learning situations should be flexible enough to accomodate the mode of presentation in terms of curriculum implementation. Individual learning is needed in certain situations, small group instruction in others, grouping by language dominance in another, etc.

26. There is no universal grouping methods according to language dominance since different learning situations demand different types of grouping. At times, it is advisable that a homogeneous grouping be employed in activities such as learning to read, while heterogeneous grouping can be used for situations aimed at developing conversational skills.

27. Sequence of curriculum presentation should evolve out of the children's interest rather than being determined by rigid scheduling. Rigid scheduling dampens self-iniitated activity.

28. Major objective of teaching techniques should be to maximize motivation to learn and to increase student's independence in the learning process.

29. Do not correct children. Self-correction is a function of language maturation. Evidence is that all children acquire their native language successfully without external interference. Frequent external correction dampens child notivation and initiative.

30. It is recommended that teachers respond to the content of what the child is trying to say or do rather than the form of what he says or does. For example: If a child says "want milk" it is recommended that the child be given milk if the situation is appropriate (lunch, snack time) rather than saying "please repeat - I would like some milk" before giving it to him.

31. Any statement about "teaching method" would be equally pertinent to all education, both Spanish-medium and English-medium. For example, it is probably true that many teachers talk too much, that their interaction with learners is excessively limited to questions susceptible to one or two-word answers. This means that these teachers need help to understand and use many techniques to elicit a great deal of meaningful speech.

32. The stress in the interaction between the adult and a child should be on affection as opposed to punishment; emphasizing respect and

avoiding paternalism. This kind of interaction should lead to a change in the attitude that a child is a thing or an object that can be changed or manipulated "because it belongs to us".

33. Use of peer group learning should be maximized both for language and non-language situations. Students with different skills, backgrounds and interests can be grouped together. For language learning it has been shown that children learn more from their peers than from "others" in the schools. The same is true for other subject matter areas.

34. There should be a plan to create frequent staff interaction. Science teachers, for example, rearely have contact with English or Social Studies teachers. Peer learning is as effective for adults as it is for students. This activity is instrumental to provide a "whole school" perspective and to offer options for greater variety and depth of learning activities.

35. Teachers should have the power, responsibility and skills to plan and develop their own curriculum whenever necessary. Not all commercially available material are equally effective and relevant for many specific situations. This may be due to the fact that they are often not prepared by those who have to use them. Given proper training and power, no teacher needs to accept all materials offered. They should be free to determine classroom format such as "open" v s. "traditional".

36. It is not necessarily a prime qualification that teachers in bilingual schools be "bilingual". Since one group of teachers are Spanish-medium workers and another group English-medium workers, each needs to be competent as teachers in only one language. Of course it is psychologically

advantageous for all faculty, etc., in the school building to know both languages, it is far easier to find two teachers, one for Spanish and one for English, than to find two teachers, both of them equally competent in both languages.

37. The experience of having learned to be a teacher through English plus the ability to talk Spanish does not prepare a teacher for Spanish-medium work. Good knowledge of the language by the teacher implies knowledge of the literature, songs, folklore, geography, dialects, history, etc., of people who speak the language in question.

38. Teacher training should be focused on the learner, therefore, materials and teaching skills should be tailored to actual student's needs. It should include things like:

(a) Use of observations as tool for assessment.

(b) Designing and development of curriculum based upon observations.

(c) Survey of community.

(d) Understanding and knowledge of fundamentals of subject matter.

(e) Design and change of physical learning environment.

(f) Development of criteria for selection and/or development of teaching materials.

39. Teachers should be skillful and patient observers of skills, interest and difficulties of learners. Observations will provide the basis for meaningful curricular activities. For example, if Student A has the ability and patience to assemble small objects, the teacher can provide

appropriate materials such as construction kits of all kinds to be assembled by the child. These kits can be relevant to curriculum (e.g. students are talking about transportation; this student can be assembling model airplanes, cars, boats, etc.). Student B may be interested in playing with water. Possibilities like studying such properties as solubility, fluidity, and buoyancy will serve as guidelines for activities and materials. Student C has a difficulty in working with fractions. Further observation shows that this student has not been exposed to concrete situations dealing with whole-part relationships. Learning materials and activities related to available things like algebricks or cardboard-prepared sets of whole and parts can be introduced. In summary, active use of existing interests and skills can generate new ones.

40. There will always be an effort on the part of outsiders to force evaluation of bilingual schooling on the criterion of test scores, particularly reading scores. This is misguided, unfair, and should be stoutly resisted. Reading is only one factor among many, which include increased joyful participation of the children in their schooling, reduced absenteeism, reduced social conflict, increased involvement of the community. Above all, evaluation should be <u>formative</u>, feed-back for self-correction and the eventual development of the a-priori "model" into a true "model," i.e., exemplary program.

41. <u>Formative assessment</u> should aim at <u>diagnosing</u>, <u>finding probable causes</u> and <u>proposing alternatives</u>. A basic concern should be to know whether learning is or is not taking place and about the possible whys to the whats. As part of the program, everybody has to be involved in obtaining, providing and analyzing information. Staff interaction needs to maximize so that infor-

mation is used continuously in an integrated fashion.

42. The major function of administration is decision-making. It should provide sound financing, facilities, equipment and personnel management, in addition to setting policies in cooperation with teachers, parents, students and community, and implementing those policies. In short, the administration should be goal-oriented, humanistic, dynamic, flexible, trained, forward-looking, involvement-minded, progressive, participatory, effective, democratic and alternative seeking.

43. The administration should be goal-oriented and objective. The administrative personnel should be trained in scientific decision-making and human relations. They should, on a continuous basis, be involved in the learning so that they can have first-hand knowledge of the actual experience of teachers and students.

44. The administrators should involve teachers, students, parents and community leaders in decision-making by continuously soliciting their ideas in solving day to day problems and in setting policies. Participation in decision-making will motivate all involved to strive harder and cooperate better in implementing decisions because of the feeling of responsibility on the part of the participants.

45. Effectiveness and not efficiency should be the aim of administration. Effectiveness means the extent to which the goals are being met whereas efficiency indiates the input-output relationships.

46. Continuous and systematic data gathering, assessment and feedback should be a part of the administration task. The assumption is that

data on a day to day experience can and should be used to improve the system performance on a continuous basis.

47. The administration should be kept abreast of pedagogical, technological and social advances so that they can incorporate the appropriate ones into the system on a continuous basis.

48. A culture is imparted and acquired by direct, repeated and varied experiences outside the level of consciousness. Culture should not be "taught" separately in classes. Therefore, the teaching of culture cannot be confused with the teaching of folklore, history and artistic expression. The teaching of components of the experiences of the learners' cultural group is a very good thing and should be encouraged. Yet, this is only a limited aspect of culture. Culture is a much more inclusive term that deals with what a group of people think is real and ideal.

49. The only way that a culturally meaningful curriculum can be developed is to involve people whose culture one wants to teach on a day to day basis. This is true because culture "resides in" and is "transmitted by" people on this basis.

50. The teaching of culture should proceed from an understanding that this concept is useful in seeing similarities between groups of people as well as differences, but that differences <u>within</u> cultures are greater than <u>between</u> cultures.

51. Culture is the total "real" and the "ideal" experiences of individuals that get generalized so that they become distinctive characteristic of the group these individuals belong to. If this is so, the term

bicultural is a contradiction in terms. This would suppose that culture is equivalent to language and can be acquired in the same way. There is no theoretical or empirical evidence that can support the concept.

52. It is a fundamental right of every people to rear and educate its children in its own image. No "research basis" is needed or should be demanded to justify this right.

53. The effectiveness of native language as a medium of work in the schools is tied to and will depend eventually on the status of it as a language of the people outside of the schools. Although there are a large number of socio-cultural factors which determine that status, a summary word is "prestige": in the eyes of the non-native and of the native speakers themselves. The latter is a function of the quality and quantity of creative literary and other production in the language and the extent to which it is thought of as the precious, idiologized symbol of being Puerto Rican or being Chicano, etc. Herein lies the gravest weakness of the bilingual education movement, and here is the place where much work must be done.

54. As a part of the campaign to give more prestige to a language such as Spanish (and thus facilitate the child's learning) there are many "ambient factors" that should be attended to:

a) Signs in the school (even its name) should be beautiful, and in Spanish.

b) School bulletins, notices, etc., and forms for the the use of teachers, pupils and parents should be in Spanish.

c) Merchants should be encouraged to use signs and ads in Spanish and these should be noted in the school's world.

d) The principal and the clerical workers and janitor, etc., should be vigorous speakers of Spanish and should be encouraged to use it freely.

e) Spanish should be used in many prestigious, public ways in the school, e.g. at assemblies and outside of the classroom.

f) There should be a school paper (at least half in Spanish) to which the pupils contribute.

55. Research in the United States does show (J. Coleman, C. Jencks) that the child's family, the community and the immediate society in which his life enfolds are more powerful educative influences than the school itself. Two corollaries flow from this: a) that the mutually-reinforcing relationship between the school and that this immediate society should be made as strong as possible, and b) that if the school cuts the child off from the influence of that immediate society it is cutting him away from his main source of educative strength.

56. Although Spanish-medium work (bilingual schooling) is a powerful educational tool, it is more pr fitable to think of it not as a pedagogical innovation but as a broad sociological movement. Any bilingual schooling project should be tied to efforts outside the school to achieve social justice.

57. Community should be involved through representation and participation in the program's staff and its educational activities. The concept of a school as a center for leadership in learning embodies the idea that the use of the different experiences of humans in a relevant context is what constitutes the basis for learning and motivation. Community representation will provide an array of relevant experiences, information and

perceptions which analyzed and used in a process of participation will provide the whole staff and the community some of the necessary bases to do education, which means learning, which means transformation. Participation in a dynamic model means activity with power, not the timid passivity of executing, implementing, tokenism, paternalism, or just being a member.

58. Community involvement should be differentiated from involvement of political leaders in the community. And should proceed to see the community as a source for fulfilling many of the educational needs as opposed to limiting it to political managerial involvement. An emphasis should be made to identify social agencies that are daily used by the community , i.e. bodegas, barbershops, churches, and recruit participants from these sources in order to fill educational needs, to pass information, to receive feedback, etc. This is of special importance in the bilingual school, where here are needs that cannot be met by relying on the professional teaching staff or by buying commercially made materials.

59. Parent participation in most schools departs from a model which may not be always true of the society at large and is certainly not always true of ethnic minorities. This is the model of an isolated family unit made up of a father that works, a mother that stays at home and a few children of close age that go to school. The role of other kin such as grandparents, older siblings, fictive (i.e. compadres) and friends of the family has been underestimated. Since there is tremendous variation in the pattern of parental employment with some fathers unemployed, many mothers employed outside the home, the care of the children is often shared by a number of people. Consequently, the goal of the parents participation should be expanded to the concept of family participation.

60. Communication between the school and the family should be approached using a combination of ways. Written memos in both languages have their place but these have built in limitations. Between people there is a network system that develops naturally or that can be activated. This network system is built as people communicate among themselves, especially between friends and kin and involves the passing on of information and the recruitment of potential participants. The important fact is that this social network system can serve as a monitoring system or a system of feedback for the school;

BIBLIOGRAPHY

Anastasi, A. and F. Cordova, "Some Effects of Bilingualism upon the Intelligence Test Performance of Puerto Rican Children in New York City. "Journal of Educational Psychology, Vol. XLIV, No. 1, January 1953.

* Alatis, James E. (ed.) Report of the Twentieth Annual Round Table Meeting on Linguistics and Language Studies. Monograph Series on Languages and Linguistics, No. 22 (1969). Washington, D.C.: Georgetown University. Press, 1970.

* _____. Report of the Twenty-first Annual Round Table Meeting on Linguistics and Language Studies. Monograph Series on Language and Linguistics, No. 23 (1970). Washington, D.C.: Georgetown University Press, 1970.

Anderson, Theodore. "A New Focus on the Bilingual Child." The Modern Language Journal, Vol. XLIV, No. 3 March 1965, pp. 156-160.

* _____ and Mildred Boyer (eds.) Bilingual Schooling in the United States, Vol. I and II. Washington, D.C.: US Government Printing Office, 1970.

* Arsenian, Seth. Bilingualism and Mental Development: A study of the Social Background of Bilingual Children in New York City. Contributions to Education. No. 712. New York: Columbia University, Teachers College, Bureau of Publications, 1937.

_____. "Bilingualism in the Post War World." Psychological Bulletin, Vol. XLII. No. 2. (February 1945), pp. 65-86.

Bernstein, B. "Social Class, Linguistic Codes and Grammatical Elements. "Language and Speech, 1962, 5, pp. 221-240.

Bever, T. G. "The Cognitive Basis for Linguistic Structures." In J. E. Hayes (ed.) Cognition and Language Learning. New York: Wiley & Co. 1970.

Bloom, L.M. Language Development: Form and Function in Emerging Grammars. Cambridge: M.I.T. Press, 1970.

* Bloomfield, Leonard. Language. New York: Hold, 1933.

* Brooks, Nelson H. Language and Language Learning: Theory and Practice. 2nd ed. New York and Burlingame: Harcourt, Brace & World Inc., 1964.

_____. "The Meaning of Bilingualism Today." Foreign Language Annals, Vol. II, No. 3 (March 1969), pp. 304-309.

* Bruner, Jerome, R.R. Oliver and P. Greenfield. Studies in Cognitive Growth. New York: Wiley and Sons, 1966.

* Bruner, Jerome. Towards A Theory of Instruction. Cambridge: Harvard University Press, 1966.

* Bull, William E. "The Use of Vernacular Languages in Education." In Dell H. Hymes (ed.) Language in Culture and Society. New York: Harper and Row, 1964, pp. 527-533.

* Canada. Royal Commission on Bilingualism and Biculturalism. Preliminary Report Ottawa: Queen's Printer, February, 1965.

* _____. Book II: Education. Ottawa: Queens Printer, May 23, 1968.

Cardenas, Jose A. "Mexican-American Education, Today and Yesterday, "Educational Leadership Conference. El Paso, Texas. Nov. 17, 1972.

* Carrow, Sister Mary A. "Linguistic Functioning of Bilingual and Monolingual Children." Journal of Speech and Hearing Disorders, Vol. XXH (1957), pp. 371-380.

Castellanos, Diego. "The Hispanic Experience in New Jersey Schools." Perspective. Division of Research, Planning and Evaluation, New Jersey State Department of Education. Trenton: New Jersey, January, 1972.

* Cazden, Courtney B. "The Situation: A Neglected Source of Social Class Differences in Language Use." Journal of Social Issues. Vol. 26, No. 2, 1970, pp. 35-59.

* _____. "Two Paradoxes in the Acquisition of Language Structure and Functions." Paper presented at a conference on "The Development of Competence in Early Childhood" Sponsored by the Development Sciences Trust, CIBA Foundation, London, January 10-14, 1972.

Cazden, C. and Brown, R. "The Early Development of the Mother-Tongue." Draft of article to appear in Eric and Elizabeth Lenneberg (eds.), Foundation of Language Development: A Multidisciplinary Approach. UNESCO (in press).

* Chomsky, Noam. Aspects of the Theory of Syntax. Cambridge: M.I.T. Press, 1965.

* _____. "Language and the Mind." Psychology Today, Vol. I, no. 9 (February 1968).

* Christian, Chester C. and Robert Lado (eds.), Our Bilinguals; Social and Psychological Barriers; Linguistics and Pedgogical Barriers. El Paso: Southwest Council of Foreign Language Teachers, 1965.

Christian, Chester C., Jr. "The Acculturation of the Bilingual Child." The Modern Language Journal, Vol. XLIX, No. 3 (March 1965), pp. 160-165.

Cordasco, Frank. "The Challenge of the Non-English Child in American Schools" School and Society. Vol. XCVI, March 30, 1968 pp. 198-201.

* Darcy, Natalie T. "Bilingualism and the Measurement of Intelligence: Review of a Decade of Research." The Journal of Genetic Psychology, Vol. CIII, December, 1963, pp. 259-282.

* _____. "A Review of Literature on the Effects of Bilingualism Upon the Measurement of Intelligence." The Pedogogical Seminary an Journal of Genetic Psychology, Vol. LXXXII, March 1953, pp. 21-57.

* Dartique, Esther. Bilingualism in the Nursery School." The French Review, Vol. XXX, no. 4, February 1966, pp. 577-587.

* Dieblold, A. Richard, Jr. "The Consequences of Early Bilingualism in Cognitive Development and Personality Formation." In Edward Norbeck, Douglass Price-Williams, and Williams M. Mc Cord, eds., The Study of Personality: An interdisciplinary Appraisal. New York: Holt, Reinhart & Winston, Inc., 1968, pp. 218-245.

_____. "Incipient Bilingualism." Language. Vol XXXVII, No. 1 (January-March 1961), pp. 97-112.

Dulay, H. C. and Burt, M. K. "An Indicator of Children's Second Language Learning Strategies." Language Learning, January, 1973, pp. 22-23.

* Eichorn, Dorothy H., and Harold E. Jones. "Bilingualism." In Development of Mental Functions." Review of Educational Research, Vol. XXII, No. 5 (December 1952), Chapter II, p. 425.

* Ervin-Tripp, Susan. "Some Strategies for the First Two Years." No. 18 (1973). Language Acquisition and Communicative Choice. Stanford: Stanford University Press (In Press).

_____. "On Becoming a Bilingual." No. 9. (1968). Language Acquisition and Communicative Choice.

_____. "Identification and Bilingualism." No. 1. (1954). Language Acquisition and Communicative Choice.

* _____. "Children Sociolinguistic Competence and Dialect Diversity." No. 21 (1968). Language Acquisition and Communicative Choice.

* Ervin-Tripp, Susan M., and Osgood, Charles E., "Second Language Learning and Bilingualism." Supplement to The Journal of Abnormal and Social Psychology, Vol. XL, No. 4, Part 2, October 1954, pp. 139-146.

* Fishman, Joshua A., et al. Language Loyalty in the United States. The Hague: Mouton & Co., 1966.

_____. "Sociolinguistic Perspective on the study of Bilingualism." Linguistics, and International Review, No. 39 (May 1968), pp. 21-49.

* Flavell, John. The Development Psychology of Jean Piaget. Princeton, New Jersey: Princeton University Press, 1963.

Fleischmann Commission Report. Part III. "Children With English-Language Difficulties." A Report from the New York State Commission on the Cost, Quality, and Finance of Elementary and Secondary Schools. Vol. II, 1972.

* Gumperz, John J. and Edward Hernandez. "Cognitive Aspects of Bilingual Communication." Working Paper No. 28 Language Behavior Research Laboratory, University of California, Berkeley, December 1971.

_____. "The Communicative Competence of Bilinguals: Some Hypotheses and Suggestions for Research." Reports on Research in Progress, Language in Society I, pp. 143-154.

* _____. and D. Hymes, (eds) The Ethnography of Communication Washington, D.C. American Anthropological Association. 1964.

_____. "Sociolinguistics and Communication with Small Groups." Working Paper No. 33, Language-Behavior Research Laboratory, University of California, Berkeley, April 1970.

* Harris, Dixie Lee. "Education of Linguistic Minorities in the United States and the U.S.S.R." Comparative Education Review, Vol. VI, No. 3 (February 1963), pp. 191-199.

* Haugen, Einar, Bilingualism in the Americas: A bibliography and Research Guide. American Dialect Guide, Publication No. 26. Tuscaloosa: University of Alabama Press, 1956.

* _____. "Bilingualism, Language Contact, and Immigrant Languages in The United States: A Research Report 1956-1970." Thomas Sebook (ed.), Current Trends in Linguistics, Vol. 10, The Hague: Monitor & Co. (In Press).

* Hymes, Dell. Language in Culture and Society. New York: Harper and Row. 1964.

_____. "Models of the Interaction of Languages and Social Setting." Journal of Social Issues. Vol. XXIII No. 2, 1967 pp. 8-28.

* International Bureau of Education, Geneva, and UNESCO. Organization of Pre-Primary Education: Research in Comparative Education. XXIV International Conference on Public Education, Publication No. 230, Geneva, Sqitzerland, 1961. 288 pp.

Jenkins, Mary. "Bilingual Education in New York City." Report prepared for the New York City Board of Education, June 1971, Program Recruitment and Training of Spanish-speaking Teachers.

* Jensen, J. Vernon. "Effects of Childhood Bilingualism." Elementary English, I: Vol. XXXIX, No. 2 (February 1962), pp. 132-143.

* Jespersen, Otto. Language, Its Nature, Development and Origin, New York; Henry Holt and Company, 1922. 448 pp.

John, Vera, and S. Moskovitz, "Language Acquisition and Development in Early Childhood." Yearbook of the Natural Society for the Study of Education. (Chicago,: University of Chicago 1970).

* John, Vera, and Horner Vivian, Early Childhood Bilingual Education: New York Modern Language Association, 1971.

* Jones, William Richard. Bilingualism and Intelligence. Cardiff, Wales: University of Wales Press, 1959. 68 pp. 45 references.

* _____. "A Critical Study of Bilingualism and Non-Verbal Intelligence." British Journal of Educational Psychology, Vol. XXX, Part I (February 1960), pp. 71-77.

Journal of Social Issues. Vol XXIII, No. 2, April 1967. Special Issue: "Problems of Bilingualism."

* Karlin, I.D. and B. Karlin. Development & Disorders of Speech in Childhood. Springfield, Ill.: Chas. C. Thomas, 1965.

Klonda L. "Bilingualism in the Southwest." Quarterly Journal of Speech, No. 31, 1945.

Kohlberg, Laurence. "Early Education, A cognitive Development View." Child Development. Vol. XXIX, 1968.

* Labov, William, P. Cohen, C. Robins, and J. Lewis, A Study of the Non-Standard English of Negro and Puerto Rican Speakers in New York City. Final Report of Cooperative Research Project No. 3288, Columbia University, 1968. 2 Vols.

Labov, William. The Study of Non-Standard English. Washington D.C.: Clearing House for Linguistics, Center for Applied Linguistics, 1969.

* Lado, Robert. Linguistics Across Cultures; Applied Linguistics for Language Teachers. With a foreword by Charles C. Fries, Ann Arbor; Michigan: University of Michigan Press, 1957.

La Fontaine, Hernan, and Muriel Pagan. "A Model for the Implementation of the Elementary School Curriculum through Bilingual Education." Prepared by Hernan La Fontaine, 1969, 10 pp. (Mimeographed.).

* Lambert, Wallace E. "Behavioral Evidence for Contrasting Norms of Bilingualism." In Michael Zarechnak, ed., Report of the Twelfth Annual Round Table Meeting on Linguistics and Language Studies. Monograph Series on Language and Linguistics No. 14 (1961), Washington, D.C.: Georgetown University Press, pp. 73-80.

_____. "Developmental Aspects of Second-Language Acquisition." Journal of Social Psychology, Vol. XLIII, February 1956, pp. 83-104.

* _____. "Psychological Approaches to the Study of Language." Part I: "On Learning, Thinking and Human Abilities." The Modern Language Journal, Vol. XLVII, No. 2 (February 1963), pp. 50-62; Part II: "On Second Language Learning and Bilingualism." The Modern Language Journal, Vol. XLVII, No. 3 (March 1963), pp. 114-121.

* _____. "A Social Psychology of Bilingualism." The Journal of Social Issues, Vol. XXIII, No. 2 (April 1967), pp. 91-109.

_____, J. Havelka, and C. Crosby. "The Influence of Language Acquisition Contexts on Bilingualism." The Journal of Abnormal and Social Psychology, Vol. LVI, No. 2 (March 1958), pp. 329-244.

* _____, and J. Macnamara. "Some Cognitive Consequences of Following a First-Grade Curriculum in a Second Language." Journal of Educational Psychology, No. 60, (1969), pp. 86-96.

* Lenneberg, Eric H. Biological Foundations of Language. With appendices by Noam Chomsky and Otto Marx. New York: John Wiley & Sons, Inc., August 1967.

Mackey, William F. "Bilingual Interference: Its Analysis and Measurement." Journal of Communication, Vol. XV, No. 4 (December 1965), pp. 239-249.

* _____. "Bilingualism and Linguistic Structure." Culture, Vol. XIV (1953), pp. 143-149.

* Macnamara, John, Bilingualism and Primary Education: A Study of Irish Experience. Chicago, Illinois: Aldine Publishing Company, 1968.

* _____. "Cognitive Bases of Language Learning in Infants." Psychological Review, Vol. 13, No. 4, October 1972 pp. 1-13.

_____. "Perspectives in Bilingual Education in Canada. Canadian Psychologist. Vol. 13, No. 4, October 1972, pp. 341-349.

_____, and T. P. Kellaghan "Reading in a Second Language." in Marian D. Jenkinson (ed.) Improving Reading Throughout the World. Newark, Del.: International Reading Association. 1969.

McCarthy, Dorothea. "Language Development in Children." In Leonard Carmichael, (ed.), Manual of Child Psychology. New York, John Wiley and Sons, 1946, pp. 476-581.

* Miller, George A., and Frank Smith, (eds.) The Genesis of Language: A Psycholinguistic Approach. Preceedings of a conference on "Language Development in Children," Sponsored by the National Institute of Child Health and Human Development, National Institute of Health, Cambridge, Massachusetts, The M.I.T. Press, 1966.

* The Modern Language Journal, Vol. LIII, No. 3 (March 1969), Special Issue, "Bilingualism in El Barrio."

* Modiano, Nancy, "National or Mother Tongue in Beginning Reading: A comparative Study." Research in the Teaching of English, Vol. II, No. 1, April 1968,

National Education Association, Department of Rural Education. The Invisible Minority. Report of the NEA-Tucson Survey in the Teaching of Spanish to the Spanish-speaking. Joseph Stocker, ed. Washington, D.C.: National Education Association, 1966.

Northeast Conference on the Teaching of Foreign Languages. "The Challenge of Bilingualism. Report of Working Committee II. In G. Bishop ed., Foreign Language Teaching: Challenge to the Professor, 1965 p. 54-101.

Peal, Elizabeth, and Wallace E. Lambert. "The RElation of Bilingualism to Intelligence." Psychological Monographs: General and Applied, Vol. LXXVI, No. 27, Whole No. 546 (1962), pp. 1-23.

* Penfield, Wilder E. and Robert Lamar. Speech & Brain-Mechanism. Princeton, N.J.: Princeton University Press, 1959.

Penfield, Wilder. "The Uncommitted Cortex: The Child's Changing Brain." The Atlantic Monthly, Vol. CCXIV No. 1, July 1964.

* Piaget, J. Cognitive Development in Children: The Piaget Papers. R. E. Ripple (ed) A Report of the Conference in Cognitive Studies and Curriculum Development, Ithaca School of Education, Cornell, 1964.

Pieris, Ralph. "Bilingualism and Cultural Marginality." British Journal of Sociology, Vol. II, No. 4, (December 1951) pp. 328-339.

Pines, Maya. Revolution in Learning: The Years from Birth to Six. New York: Harper & Row, 1967.

Ramirez, Manuel III, "Cognitive Styles, Cultural Democracy in Education and Mexican-Americans." University of California, Riverside, 1972 (Mimeo).

_____. "Current Educational Research: The Basis for a New Philosophy for Educating Mexican-Americans." University of California, Riverside, 1972 (Mimeo).

* Ronjat, Jules. Le Development du Langage Observe Chez un Enfant Bilingue. Paris: Librairie Ancienne H. Champion, 1913.

* Saer, D.J. "The Effect of Bilingualism on Intelligence.: British Journal of Psychology, No. 14 (1923) p. 25.

* _____, et al, The Bilingual Problem. Aberystivth, Wales: The University College of Wales, 1924.

Singer, Harry, "Bilingualism and Elementary Education." Modern Language Journal, Vol. XL, No. 8, December, 1956 p. 444-458.

* Skinner, B.F.; The Technology of Teaching. New York: Appleton, Century and Crofts, 1968.

* Stern, H.H. Foreign Languages in Primary Education: The Teaching of Foreign or Second Languages to Younger Children. Report on an International Meeting of Experts, April 9-14, 1962. Hamburg: UNESCO Institute for Education, 1963.

Swain, Merril, (ed.) Bilingual Schooling, Some Experiences in Canada and the United States. Symposium Series/1 Ontario Institute for Studies in Education. A Report on the Bilingual Education Conference, Toronto, March 11-13, 1971. Toronto.: Ontario Institute for Studies in Education, 1972.

Ulibarri, Sabine R. "El Alma de la Raza" Lectures given at the Cultural Awareness Institute held at College of Education, University of New Mexico, in August 1970, (Mimeo).

_____. Interpretive Studies on Bilingual Education. U.S. Department of Health, Education and Welfare Office of Education, Bureau of Research. Albuquerque, New Mexico: University of New Mexico, College of Education, March 1969.

* UNESCO. The Use Vernacular Language in Education. Monograph on Fundamental Education No. 8. Paris: UNESCO 1953.

* Vygotsky, L.S. Thought and Language. Cambridge, Massachusetts: The M.I.T. Press; 1962.

* Weinreich, Uriel, Languages in Contract: Findings and Problems. The Hague Mouton & Co. 1967.

White, R. W. "Motivation Reconsidered; the Concept of Competence." Psychological Review; No. 66, 1960 pp. 297-333.

* White, S.H. "Evidence for a Hierachical Arrangement of Learning Processes." Advances in Child Development and Behavior. L.P. Lipsitt. and C.C. Spiker, (eds) New York: Academic Press 1965.

Yamamoto, Koaru, "Bilingualism: A Brief Review.: Mental Hygiene, Vol. XLVIII, No. 3 (July 1964), pp. 468-477.

Zintz, Miles. Education Across Cultures Dubu que, Iowa: Wm. C. Browne & Co. 1963.

* Readings used as data for analysis

APPENDICES

APPENDIX A

BILINGUAL EDUCATION AS A SCIENCE

To study bilingual education in a meaningful way, there is a need to look at the phenomenon from the position of a scientist. Such position means an attitude towards knowledge rather than prevalent notions related to objectivity and scientific method. Much confusion and pseudo-sciences have emerged from such notions. An evidence of this is the present state of affairs in education, where poor technicians are being produced and then mislabelled as teachers, human beings are treated as products, and the consumer is blamed for failures of the mass producer. A direct consequence in bilingual education as commonly practiced is the failure to look at the phenomenon in other fashion than through the eyes of "educational theories" that have not been successful in dealing with the problems of the learner. Even at the conceptual level, there has been a failure to recognize that what might look like an innovative practice is nothing more than traditional education plus two or more additional subjects. This situation does not need to be the case, and an alternative approach need to be developed.

A basic ingredient to this approach should be the way in interaction between phenomena, theory and technology is looked upon. To start dealing with the phenomena aspect, there is a need to provide some answers to the following question: How is perception and awareness of a phenomenon initiated? In a given situation, it could start as pure speculations initiated by the investigator. (The denotation of investigator or scientist will refer to any human being throughout the report). The depth of speculations depend upon technological products available which might have come as a result of the application of a theory that does not need to be related to the phenomenon, whether we are talking about upon what is already known about the phenomenon, or upon current awareness of the nature of the phenomenon, etc. These speculations of the investigator

could be initiated as a by-product of other goals aimed at knowing about other things, or by an accident that forced the need for some solutions, or by perceived relevancy to any phenomenon being investigated, etc. The important thing to notice here is that the investigation about a phenomenon is initiated by many different circumstances, and that the depth of the investigation will be dependent upon some theoretical and technological advances. The perceived nature of the phenomena will also be dependent upon the status of knowledge on it. If we return to the study of bilingual education in reference to what has been said, we can see that one of the negatives of the phenomenon has been its initiation (as a widespread educational practice) in some sort of crisis context.

One way of looking at a theory is as a product of science. It has been mentioned earlier that the word science, as used in this report will refer to an approach or attitude towards knowledge. In lieu of approaching science from the standpoint of a rigid step-by-step method and overconcerning ourselves with the concept of objectivity, it is proposed that it should be always looked as a binding process between an awareness (or need for) of the nature of phenomena and the tools or products of technology. Such process or attitude is aimed at explanation, organization of percepts, and generalizations. The methods will then be varied and relevant or relative to the nature of the phenomenon under consideration. Through this point of view, it is hoped that more meaningful and powerful science will emerge. Practitioners will be able to see themselves and act as scientists rather than applying blindly a technology that others developed in another context. Research will be a continuous process involving the phenomena, the theories, and the technology. In a sense, the teacher will then be a scientist learning continuously from the learner, at the same time, the learners are actualizing their own learning powers.

The teacher will then develop criteria for use and creation of technology from the standpoint of a scientist-producer rather than consumer.

Technology refers to the set of tools either created from theoretical applications or through a natural process of accidents, satisfaction of needs, etc. In other words, man can or cannot be aware of the theoretical basis of a given technical device, or parts of it. For this reason it is important to work with technology with the awareness that it could lead to an influence upon theory (like either developing or influencing a theory) and/or upon the perception and awareness about a phenomena. In other words, tools will become dynamic rather than static and thus any object can be seen as part of the technology for education. Furthermore, as educational tools, the criteria for assessment should be in reference to learning rather than physical characteristics. Even cost-benefit analysis ought to be based upon the process and outcome of learning. A failure of education, and bilingual education has not escaped from it yet, has been to divide the degree of expertise (on massive terms, although there are exceptions) among different sets of educators. On one hand there might be a set of educators that have been able to conceptualize a given phenomenon from the standpoint of an array of factors such as values and philosophical implications, political reality, historical perspectives, alternative directions, etc. Another might have addressed themselves to the conceptualization of the phenomena in terms of possible organization of facts, potential generalizations, evaluation of applications, etc., while others might have been dealing with technological devices aimed at solving educational problems, maintaing learning at certain level, or looking at the products of trends in order to place themselves on the innovative stream. There is no guarantee that they will communicate <u>when it is necessary</u> in order to maximize

the use of the information, speculations, and skills they have. It is the purpose of the proposed alternative to barely start bridging that unnecessary gap. From the initial conceptualization of the phenomena, the research team has held the position that unless this gap is bridged in actual day-to-day practice, education will continue to be a sinusoidal curve tied up to the process of decay with time and space (history and location, ups and downs in everyday language). When the downward movement is as obvious as crisis, then a need is identified and if the political climate is appropriate, something is initiated to deal with it. In the meantime, society in general, and human beings in specific might have suffered unnecessary harm. More importantly, the answer to the following question ought to be provided. To what extent society will be patient enough to give a fair opportunity to a movement which might be working uphill both from the obvious deficiencies of the process of education itself, from existing political reality, and from the historical consequences of failure, misunderstanding and indifference?

Can new models or planned variation experiments provide necessary answers? The alternative submitted is a proposed answer to the two aforementioned questions. A second position needs to be spelled out in order to provide a basis for the development of answers or alternatives. If we deal with models at the conceptual level there might be answers that can be generalized in space and time (applied to different locations at different historical moments). If we deal with models as a technological device to be "sold" to specific situations based upon immediate relevancy or "forced" based upon general success, a contribution will be made to the string of sacred cows with enough "research evidence" to survive. A model at the level of technology can be successful in a given location at a given time, but by the very nature of being successful it will generate change and it will not be valid anymore. There have been

enough contradictions of this type in education where the nature of the learner and the society are not the same as when implementation started, yet the phenomenon, theoretical knowledge and technology are assumed constant until a crisis tells otherwise. A conceptual model will be flexible enough to provide immediate alternatives that will change according to what is happening to the learner, his immediate community, and society in general. After all, education is and has to believe in change. We can plan strategies for change, but the causes of change are too many to forecast in such specific terms as to be able to specify technologies to deal with the future.

APPENDIX B

GENERAL PROCEDURES

The Bilingual Education Model was developed by the research team using three basic sources of information:

1. They interviewed thirty-three prominent experts in the areas of language development, anthropology, psycholinguistics, psychology, educational administration, political science, sociology and various other academic disciplines relevant to the implementation of bilingual education programs. (See Appendix C for list of interviewees).

2. They reviewed more than two hundred and fifty pieces of literature. These sources included journal articles, monographs, ERIC microfiche, newspaper articles, and numerous books.

3. They carried out a detailed content analysis of a random stratified sample of twenty-three Title VII Bilingual Educational Programs proposals.

The actual procedures and strategies which were carried out within each of these three sources were decided by the whole research team. The team had weekly planning sessions to outline their procedures. During these sessions, the team assessed the progress of the model and attempted to solve any problems which any member had encountered.

These meetings proved to be an invaluable component in the development of the model. They served as a vehicle for an open exchange of ideas and information, which led to the eventual synthesis of the model. In addition to these weekly team meetings, individual members of the team had conferences with each other to discuss their common concerns.

Interviews

The research team identified several experts which they perceived could make

meaningful contributions to the study. At the outset of the project, the team had planned to interview approximately fifteen people, however, by its conclusion, the team had interviewed more than double that number.

As the interviews proceeded, experts recommended other specialists who they felt would make a significant contribution to the project. These experts proved to be a rich source of relevant information for the project.

The interviews were conducted usually by three to four members of the team. They employed a questionnaire which focused on learning theory as well as the practical aspects of the implementation of Bilingual Programs. (See Appendix D for Interview Questionnaire) In addition to notes taken during the interview, almost all of the discussions were taped.

At the conclusion of the two or three hour interview session, the interviewee was asked to recommend other individuals whom they thought should be interviewed or publications to be reviewed. This chain reaction process enabled the team to develop a comprehensive list of other persons who could contribute to the study. The experts selected were from various academic disciplines and included practitioners and administrators in the field of bilingual education. These specialists represented various geographical areas within the United States as well as Puerto Rico and Canada. Besides representing various geographic and academic areas, the experts reflected a wide range of philosophic beliefs and theories. (Appendix C lists the names and addresses of each of the experts interviewed).

These interviews provided the team with personal interaction with informed authorities who offered insights that helped them to carry out refinements in the planned strategy. These interviews also gave the team a broad spectrum of opinions on numerous topics related to the model.

Content Analysis of Proposals

The research team completed a content analysis of twenty-three Title VII Bilingual Education Programs. These proposals were selected from the following states: New York, New Jersey, Connecticut, California, Texas, New Mexico, Arizona, Florida, Illinois, and Washington. These areas were selected based on the population density of Spanish-speakers within that particular geographical locale.

Additional criteria to assure a random stratified sample was utilized, this included representation of urban and rural areas and large and small cities. The team was able to contact most of the Directors of Bilingual Education in each of the above states and ask them to identify the best bilingual program in their respective states.

Copies of the selected proposals were obtained from the Bilingual Applied Research Unit, formerly Modeling Innovative Programs. (Hunter College, City University of New York).

Using a guideline parallel to the interview questionnaire the team was able to identify the salient components of the Title VII proposals. The team was aided in this task by two experienced Research Assistants from the Bilingual Applied Research Unit mentioned above. The research team felt that these proposals were the closest source of information to reality.

Table I shows the initial projection of proposals to be reviewed and Table II reports the ones that were actually analyzed by state, location, Health, Education and Welfare project number, and project title. (See next pages for tables)

TABLE I

Proposals: Projections For Review

1. Region

Northeast	(5)
Southwest	(18)
Southeast	(1)
North Central	(2)
West	(1)

2. Breakdown within region

(a) Northeast:

New York City	2
New York State	1
New Jersey	1
Connecticut	1

(b) Southwest:

California	7
Texas	6
North Mexico	3
Colorado	1
Arizona	1

(c) Southeast:

Miami	1

(d) North Central:

Illinois	2

(e) West:

Washington	1

TABLE II

Title VII Proposals Which Were Reviewed

State and Location	Name of Project	Health, Education and Welfare Project Number
Arizona		
Phoenix	Individualizing Bilingual Bicultural Instruction	66
Phoenix	Phoenix Union Bilingual System	265
California		
San Jose	Spanish Dame School Project	466
Calexico	Calexico Intercultural Design	279
Gonsalves	Gonsalves ESL Bilingual Program	158
Los Angeles	Bilingual Schools Program	222
Fountain Valley	Bilingual and Bicultural Model Early Childhood Education Program	431
Santa Ana	Bilingual Education and Diagnostic Placement Program	173
Los Nietos	Bilingual-Bicultural Education	132
Riverside	Follow Through Project	-
Connecticut		
Hartford	Project Exito	571
Illinois		
Chicago	Bilingual Education Center	288
New Jersey		
Lakewood	Bilingual Education in a Consortium	501
Vineland	New Jersey Bilingual Education Program	37
New Mexico		
Albuquerque	Albuquerque Public School's Bicultural-Bilingual Program	29

Las Vegas	Joint Bilingual Program Las Vegas and West Las Vegas Schools	418
New York		
Bronx, N.Y.C. NYC District #7	The Bilingual School (P.S. 25)	312
Brooklyn, N.Y.C. NYC District #13	The Bilingual Education Program of District #13	328
Brooklyn, N.Y.C. NYC District #14	Bilingual Pre-School Learning Center	330
New York, N.Y.C. NYC District #2	Building Bilingual Bridges	7
Texas		
Austin	Region XIII Bilingual Education	94
El Paso	ALMA - Adelante Los Mexico Americanos	339
Edgewood San Antonio	Better Education Through Bilingualism	298
Washington		
Yakina	Intermediate School District No. 105 - Bilingual Education Program	434

Literature Review

The entire team initially reviewed extensive bibliographies and then selected by title those articles which appeared to be relevant to the purpose of the study. They felt that these articles could provide the model with wider coverage of space, time, and content than either the interviews or the proposals could offer. Many persons that are not widely known or accessible write in journals. The analysis of literature allowed the research team to cover a wider spectrum of content including international publications and to go further back

in time to collect data.

TABLE III

Literature: Criteria For Selection

1. Time coverage

1970	10	
1966-1970	15	
1960-1965	10	.....
1950-1959	5	Out of 50 articles 35 will
1950-1949	5	be of last 12 years (70%).
.....1939	5	

2. Total.....50

3. Space: should not be limited to U.S.A.

4. Languages: 75% must be about Spanish/English situation.

5. They should cover

   3 components (philosophy, theory, practice)
   3 dimensions

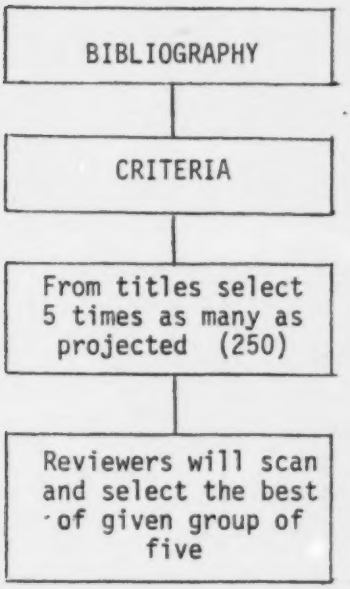
   adequately and proportionately. (cognition, skills, affectivity).

6. Referral to one or few types of journals must be avoided.

7. Target population is Spanish K-3.

TABLE IV

Literature: Process For Selection


BIBLIOGRAPHY
CRITERIA
From titles select 5 times as many as projected (250)
Reviewers will scan and select the best of given group of five

After 1970.....50

1966 -1970.....75

1960 -1965.....50

1950 -1959.....25

1940 -1949.....25

1940 -1949.....25

On or before 1939.....25

Overall Approach

The overall approach in creating the implementation model was to synthesize the three sources of data. Table V illustrates the approach the team used in this process. They completed an analysis among the interviews, readings, and Title VII proposals.

TABLE V

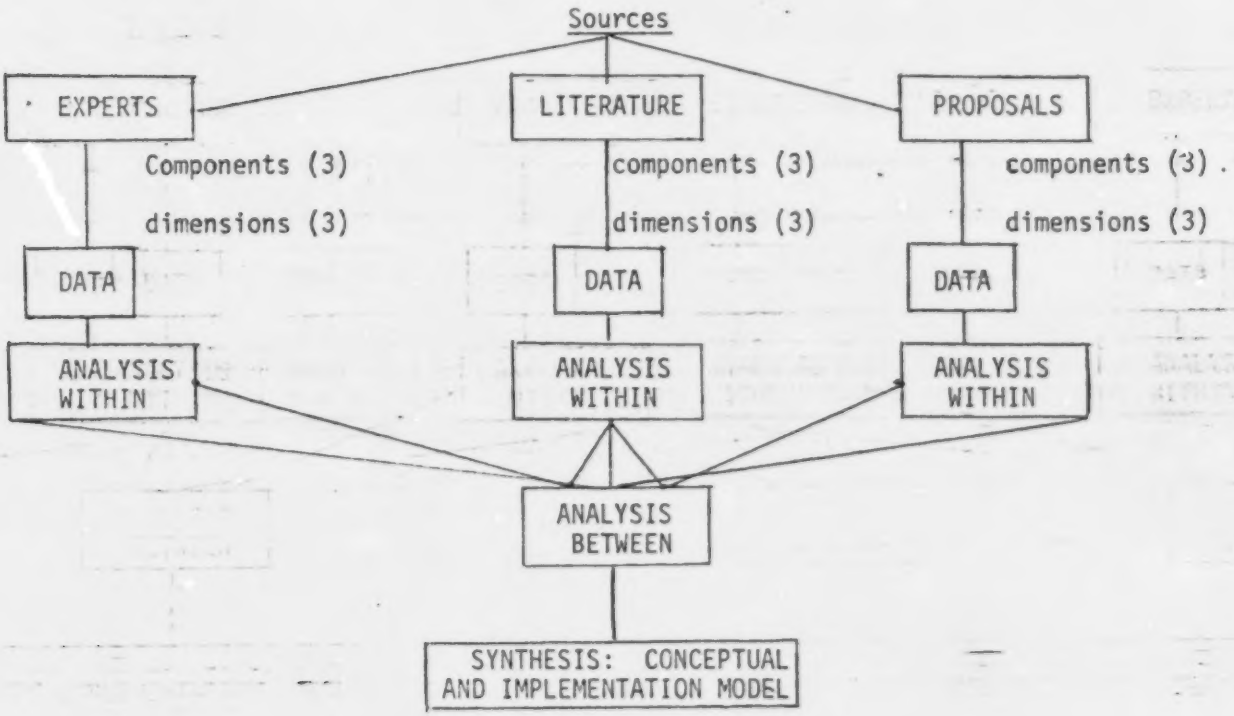
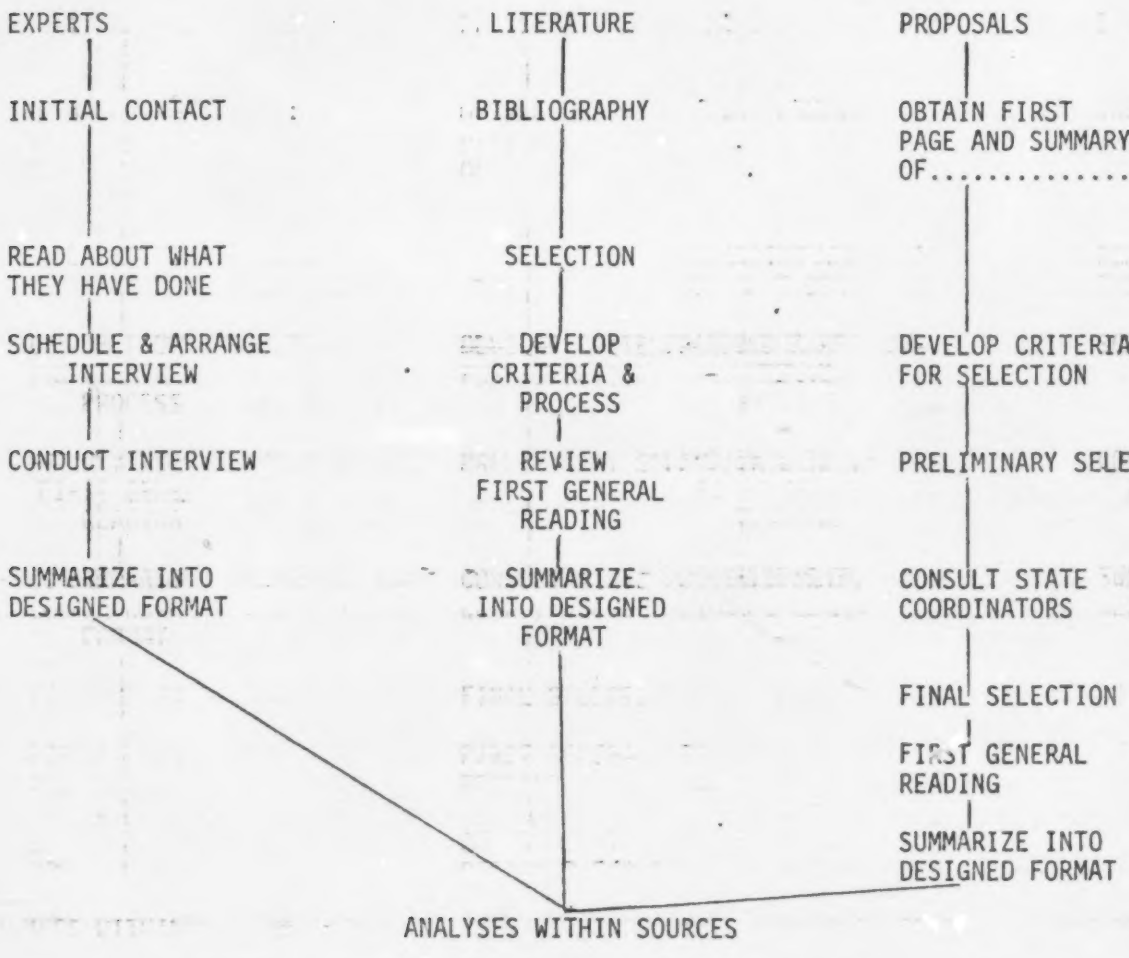


Table VI portrays an operational expansion on how data sources were treated. The transcription of the interviews was omitted because of time factors. Instead, summaries were made of significant statements taken from the notes made by interviewers during each interview and relistening to tapes whenever necessary.

TABLE VI

Operational Expansion of Data Sources

(1) interview development
(2) selection



APPENDIX C

LIST OF INTERVIEWEES

Juan Aragon
Director, Cultural Awareness Center
University of New Mexico
Albuquerque, New Mexico 87106
Special Assistant to the Executive Director
of Bilingual Children Television

Margot Arce de Vazquez
Prof. Emeritus, Dept. of Hispanic Studies
University of Puerto Rico
Rio Piedras, Puerto Rico

Francisco Manrique Cabrera
Prof. Of Hispanic Literature and Critic
Dept. of Hispanic Studies
University of Puerto Rico
Rio Piedras, Puerto Rico

Noam Chomsky
Prof. of Literature and Linguistics
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts, 02139

Courtney Cazden
Prof. of Education
Director of Master of Arts in Bilingual Education
Harvard University
Larsen Hall, Appian Way
Cambridge, Massachusetts 02138

Bob Cruz, Executive Director
Bay Area Bilingual Education League
1414 Walnut Street
Berkeley, California 94722

Ruben del Rosario
Prof. Emeritus Hispanic Studies
University of Puerto Rico
Rio Piedras, Puerto Rico

Susan Ervin-Tripp
Prof. of Linguistics
2125 D-Winelle Hall
University of California
Berkeley, California 94720

Bruce Adolph Gaarder
Deputy Director
Northeast Division
Office of Education
Dept. of Health, Education and Welfare
Washington, D.C. 20202

Caleb Gattegno, Director
Educational Solutions
80 Fifth Avenue
New York, New York

Sister Francis Georgia
Bilingual Education Unit
State Dept. of Education
183 Tremont Street
Boston, Massachusetts 02111

Severo Gomez
Assistant Commissioner
International and Bilingual Education
Texas Education Agency
Austin, Texas

John Gumperz
Prof. of Anthropology
University of California
Berkeley, California 94720

Ken Hale
Prof. of Linguistics
Massachusetts Institute of Technology
18 Vassar Street
Cambridge, Massachusetts 02138

Einar Haugen
Prof. of Languages
Dept. of Germanic Languages
Harvard University
Cambridge, Massachusetts 02138

Edward Hernandez
Prof. of Linguistics
Stanford University
Stanford, California 94305

Kai-Yu-Hsu
Chairman, Dept. of World Literature
San Francisco State College
San Francisco, California 91432

Vera John-Steiner
Prof. of Psychology
University of New Mexico
Albuquerque, New Mexico 85101

Hernan La Fontaine
Former Director of the First New York City
Bilingual School
Now Director of Bilingual Education
Board of Education
110 Livingston Street
Brooklyn, New YOrk

Robert Lado
Dean Institute of Languages and Linguistics
Georgetown University
37th and O Street, N.W.
Washington, D.C. 20007

John Macnamara
Prof. of Psychology
Mc Gill University
Montreal, Quebec, Canada

George Miller
Rockefeller University
1230 York Avenue
New York, New York 10003

Mariano Perero
Head of Language Department
United Nations International School
235 East 11th Street
New York, New York 10003

Angel Quintero Alfaro
Former Secretary of Education of Puerto Rico
University of Puerto Rico
Rio Piedras, Puerto Rico

Manuel Ramirez
Prof. of Mexican-American Studies and Psychology
Dept. of Mexican-American Studies
University of California at Riverside
Riverside, California

B.F. Skinner
Prof. of Psychology
Harvard University
Cambridge, Massachusetts 02138

Merrill Swain
Director of the Bilingual Education Project
Ontario Institute for Studies in Education
252 Bloor Street West
Toronto 181, Ontario, Canada

Rudolph Troike, Director
Center for Applied Linguistics
1611 North Kent Street
Arlington, Virginia 22209

Benjamin Tsou
Prof. Of Linguistics
University of California at San Diego
San Diego, La Jolla, California

Horacio Ulibarri
Department of Education
The University of New Mexico
Albuquerque, New Mexico 87106

Sabine Ulibarri
Department of Foreign Language and LIterature
University of New Mexico
Albuquerque, New Mexico

Nelson Viera
Assistant Prof. of Language
Director of Summer Teacher Training Institute
Department of Language
Brown University
Marston Hall
Brook & Manning St.
Providence, Rhode Island

Oswald Werner
Prof. of Anthropology
Northwestern University
Evanston, Illinois 60201

APPENDIX D

INTERVIEW QUESTIONNAIRE

CAPACITY

1. Is linguistic capacity innate, learned or both?

2. Is there a relationship between linguistic and intellectual capacity? If so, what Kind?

3. To what extent is language acquisition and development dependent upon age and/or practice?

4. What is the cause(s) of individual differences in language growth and proficiency?

5. What is the relative importanceof the following variables in determining bilingual proficiency: aptitude, motivation, practice?

PRACTICE

6. In which aspects of language development (oral or written) is practice more meaningful?

7. Does practice play an important role? What amount, and what kind is suggested? For example how frequent should repetition be used for increasing vocabulary?

8. Should the role of practice for a given aspect of language development be a function of age?

9. What is the role of positive reinforcement for the efficient use of practice? If this role is meaningful, what kind of reinforcement?

10. Does practice interfere with creative aspects of language?

MOTIVATION

11. What do you see as major components of the motivation to learn more than one language? What is the relative importance of these components?

12. What do you perceive as meaningful characteristics of human motivators in learning environment (e.g. teachers, parents, etc.)

13. What approach do you suggest for those students who do not seem interested in learning another language?

14. What do you think of behavioral objectives as expected goals for students performance in connection with motivation?

15. How do you relate language development to affective development (motivation, self-concept, cultural attitude, etc.)?

UNDERSTANDING

16. How do you define understanding with respect to language learning?

17. What approach(es) do you suggest to accomplish what you have defined as understanding of language?

18. What relevance do the following variables have to understanding: practice, structure of environment, past learning, theory, insight, motivation, capacity?

TRANSFER

19. Does the teaching of two languages simultaneously have facilitating, inhibiting, or virtually no effect on language development? Would you suggest why?

20. Is there a critical stage in child development in which the transfer or switching between languages is more effective?

21. What is the effect(s) in switching the use of languages in different situations (school, home, street, etc.); in different role-relations (parents, teachers, peers)?

22. Does the transfer between languages as the medium of instruction affect the learning of academic skills? If so, what academic areas are most affected and why?

23. What is the relationship between the closeness of the language structures and the transfer between languages?

24. Do different degrees of transfer exist in different language skills or aspects? If so, what skills or aspects cause the most problems in transfer?

25. In general, what do you see as the optimum conditions to maximize positive transfer in bilingual learning situations? (English-Spanish).

FORGETTING

26. What factors are relatively more responsible for forgetting languages - time, negative attitude, material, relevance, interferance, frequency of use, language community?

27. Do different degrees of forgetting happen between retaining the first language and learning the second language?

28. In general, what do you see as the optimum conditions (instructional time, bilingual facilities, teaching strategies) to minimize forgetting or languages in a bilingual learing situation?

29. What role do you think forgetting plays in the case of a bilingual person who is dominant in one of the languages?

LANGUAGES

30. What do you define as a language?

31. In some bilingual programs the dominant language of the child is used as the vehicle of instuction. How does this affect the following:

(a) language arts (nature and the other languages)
(b) concept and skills development in subject matters (math, science, etc.)
(c) learner's attitude

32. Do you think bilingual education is important? Why?

33. If it is important, what should be the major goals?

34. What approach do you suggest for attaining the goals you mentioned?

35. What is the relationship between language development and thought processes?

36. What do you think is the best approach for learing two languages (listening, speaking, reading, writing)?

37. How is language developed? (transformational, structural, sociolinguistic).

CULTURE

38. How would you define bicultural education?

39. What benefit do you see in this educational approach? For the specific case of Spanish-English bilingual programs?

40. Which goals do you perceive as more meaningful for the aforementioned approach?

41. Can you give us some ideas on how to accomplish those goals?

42. How do the following affect language acquisition and development in a bilingual situation?

(a) culture
(b) nature of subculture in relation to general culture
(c) topic of reference (e.g. a daily routine, subject matter)
(d) cultural background of models (including teachers)
(e) attitude towards the concept of "standard language".

IMPLEMENTATION

43. For the implementation of a Bilingual Education instructional model, what do you see as essential practical principles to be followed in:

(a) Development and use of curriculum materials?

(b) Grouping of students?

(c) Teaching methodology?

(d) Determining the instructional time devoted to each language?

(e) Assessing language dominance?

(f) Developing a program for parental and community involvement?

(g) General organization of the program?

(h) Teacher training or retraining?

(i) Assessing the effectiveness of a program?

APPENDIX E

RESULTS OF ANALYSIS OF INTERVIEWS

Procedure

The interviewers prepared notes of the most outstanding and relevant points that were developed during the interview. The interviews were taped on most occasions and usually there were two or three interviewers present. All the interviewees were very cooperative and showed interest in the topic.

As a starting point for the analysis, consensus of the content of the notes taken by interviewers for each interviewee was developed. Whenver disagreements or needs for clarification emerged, the tapes were used as raw data for review, discussion, and clarification. In this fashion, all the thirty-three interviews were converted into lists of points made relevant to the purpose of the study. The next step was to start with one of the summary lists (to be called initial list) and compare it with the summary list of another interview. In case the analysts judged that two points were close in terms of content and procedural implications, a frequency count was started on the corresponding point of the original lists. For example, assume that the original list prepared from interview A has a list of 23 points, the fourth point stressing that children are capable of learning several languages this being a function of age in terms of potential advantages (like to start early in child's life is better). If interview B had a point that was in agreement with such position, then point number four of the initial list was given a frequency of two advocates. Points judged as divergent or different were added to the original list (now

called the expanding list). In this fashion, lists A and B were compared for convergency and divergency of points, thus producing an expanding list. The same process was continued for all interviews, one by one, always using expanding list from previous analysis as frame of reference until the last interview is reached. The final list then represented the summary of all points and their frequency of occurence. This list was then sub-divided according to following areas related to the study:

1) Language, thought and emotions
2) Culture
3) Motivation
4) Evaluation, assessment and research
5) Teacher, teaching and training
6) Correction, mistakes and errors
7) Politics and attitudes of society in power
8) Interaction and learning
9) Languages, family and community
10) Schools
11) Models
12) Strategies: Curriculum and materials

Summary

1. Language, thought and emotions

The most frequently mentioned points were related to age, capacity, motivation and development of thought processes. Capacity to learn languages is a universal human characteristic.

Being capable of learning several languages, it is most efficient to begin the process at the earliest possible age. The quality of exposure to languages is very important, this quality being related to situations where the learner can be aware of meaning and value. It should be a natural, non-forced communications situation where the learner is able to function in such a way that interaction with available models will result in use of language. This is much more efficient in terms of outcome and motivation than meaningless, out of context practice of patterns or drills. For this reason, it is very crucial to work on the creation of such situation as the learning environment. In the Spanish-English bilingual situation, we must recognize the fact that it is easier to learn to read and write in Spanish because of the consistency between the sound and the symbol. Phonological, semantical and syntactical skills are developed simultaneously during the process of language acquisition.

The use of language in teaching non-language concepts where thought processes and learning products will be produced by the learner should be maximized in relation to the teaching of language as subject matter, which should be minimized. Teachers should also be aware of the limitations of language. Consideration of the different frames of references between teacher and learner must be taken into account in order to properly distinguish between "misunderstanding" and lack of understanding.

The interviews produced the following list of recommendations:

a) Learners should be allowed to listen without requesting production of speech in order to insure optimal language development. This allows for the process of organizing speech data to take place.

b) There is a need to work with children under the assumption that the process of acquisition of another language is similar to the one used in acquiring his native language.

c) There should be a relaxed atmosphere during language acquisition activities so that learners are not afraid of making mistakes.

d) Learners should be exposed to different speakers and various dialects of a language, for both languages in the bilingual situation.

e) Exposure to real communication situations will allow the learner to work on speech styles. This is an important aspect of communicative competence and is usually ignored in language instruction.

f) Schools should make an effort not to mix languages.

g) In translations, context and emotions are lost (matices del lenguaje). We should be aware that even within languages there are no absolute synonims. The implication is that translation is a poor teaching approach.

h) Language is not just an informative subject, it is a formative one. Through language we feel, think, express, and communicate.

i) We must be aware that a person can learn the language of a culture he "does not like" provided he perceives and internalizes the value or use of doing it.

j) Ideas can develop even though they cannot be expressed through language. There are non-language forms of expression and communication.

k) Practice equated with memorization and routines has a negative effect on creativity.

l) Historians, sociologists, linguists, anthropologists should study Spanish dialects in the U.S.A. Dialects provide synonims to language and children should understand that differences provide richness, and understanding of the language.

m) Educators must consider factors such as the volume of existing literature and lack of terminology for a specific subject that might affect the learner's perception and valuing of a given language.

n) Learners should be exposed to people proficient in languages. There should be an opportunity for them to identify themselves with some of the "performers."

o) All dialects can express equally complex logical structures. The problem is that the status given by society is primarily related to the status of the speakers.

p) When dealing with a language other than the native language, the emphasis should be on successful communication in the sense of understanding and coveying meaning, rather than a standard of correctness.

2. Culture

The "bicultural education" label was frequently questioned. The conceptual rationale was understood from the standpoint of political and emotional considerations, but it was pointed out that careless considerations of the implications have led to superficial stereotyping (see Appendix F Culture and Society: Implications for Bilingual Education Programs). There is a need to distinguish between functioning in different cultures and cultural affiliation. Affiliation is a personal decision. A multicultural approach was seen as more valuable, less restricting, provided that the question: Who am I? is always considered in relation to the learner. Additional comments, less frequently, mentioned follow:

a) We learn with our sight, emotions, force, memory, thought, history, with all our involvement. Education must deal with the human being as a whole.

b) There is a need to investigate what the child has at home that belongs to his culture in order to develop a meaningful program of total cultural participation.

c) Language is vehicle through the culture is conveyed. Destroying a language is cultural genocide.

d) Cultural heritage should not be equated with historical nostalgia.

e) There should be questioning and analysis related to culture in contrast with passive acceptance, provincialism and romanticizing reality.

f) Biculturalism is an untenable construct. There are various degrees of cultural overlap and cultural difference. We should avoid the distillation of cultures and the use of those distillations in the teaching of children.

g) The use of culture in learning is more important and efficient than the approach of "learning culture."

h) Culture is a set of shared elements. The traditional concept of culture is undergoing some changes where definitions and analysis techniques are being questioned.

i) Items valued most by, or identified with, a culture should be taught in the language of that culture.

3. Motivation

Almost all the persons interviewed agreed that motivation is the most important variables in learning. A major function of the teacher was viewed as working towards maximizing motivation in the learner, especially the internal or or intrinsic type. Learning activities should increase motivation. The type of learning activities criticized were those related to drills, routines and "book knowledge". Forgetting was seen as a function of learning irrelevant things. The way of life of the student and the school should be matched in such a way that the student can identify himself with the institution, the curriculum and the teacher. Additional comments follow:

a) The learner should be able to see the purpose of studying additional languages. Situations should be created where language is not forced.

b) There is a need to work with the physiological aspects of motivation, e.g. low attention due to nutrition deficiencies.

c) The use of what the child brings to the program should be encouraged. With some imagination, teachers can help students go deeper into knowledge using what he already has learned.

d) In some cases of low motivation towards one particular activity, the cause may be that the learner is relating it to some other things not necessarily part of the subject matter. An example of this is the negative attitude towards mathematics that can be due to things like teaching method, teacher, materials etc.

e) The learner's interest in the content of communication is a crucial motivating factor. For this reason functional, relevant, context-oriented language is very important.

f) Learner's perception of the status of the language in the media and the school is a very important motivator.

g) Being able to communicate with his peer group is an important motivating factor.

4. Evaluation, Assessment and Research

Formative assessment should be an integral part of an educational program. It should be simple, informal and continuous. The assessment plan should be monitored and may include some frequently neglected aspects such as; books checked out, visits made to the school, attendance, discipline, nature of classroom interaction, learners' and community perception of school and teachers should be assessed. Teachers must be given more training in assessment and evaluation procedures. They should know how to develop criterion-referenced tools and be trained as observers. There were not many arguments for testing and external evaluations.

They favored more on-site evaluations, mostly of the inspection type. The criterion for determining educational success or failure should be based upon what eventually happens in the learner, the society, and the institution. Short term evaluations were considered inadequate for this purpose. Several experts advocated long-term-longitudial studies.

5. Teacher, Teaching and Training

Teacher's enthusiasm, concern for student, and expectancy were seen as accounting for large part of learner's motivation. The role was seen as one of sustaining and assessing the learning process. The perception of what a teacher is and of the role of teacher aides needs to undergo a profound change. A top priority should be "reconditing" or changing the self-concept and motivation of teachers. In other words, teachers should become more of a "scientist" than just a maintainer of institutionalized methods, materials, and attitudes. The meaning and success of an educational change will be a function of what is done in teacher-training. Some suggestions follow:

a) There should be more articulation between theory and practice in training.

b) Emphasis should be shifted from process and tools in teacher-training to providing basis and experience for looking at the learner as a point of departure and assessment.

c) College teachers also must change, otherwise, training will continue failing.

d) There should be "teacher clinics" where teachers go through the same things students are going to be subjected to, and then analyze the experience.

e) Part of the training should focus on the question: Who is deficient, the learner or the teacher?

f) Explore possibility of a field center for teacher training which utilizes identified specific strengths of colleges in the area.

g) Development of educational materials and criteria for selection from among those already available should be another aspect of training.

h) We must be aware that at the present time it is easier to find one good Spanish-dominant teacher and one good English-dominant teacher than to locate two good "bilingual teachers."

i) Good knowledge of the language by the teacher implies adequate knowledge of the literature, songs, folklore, geography, dialects, history, etc., of people who speak the language in question. This almost calls for a "native" as a teacher.

j) Teachers should be trained to become aware of and understand the culture of the children. The assumption that a person who "belongs" to a culture is aware of and understands it does not hold in many cases.

6. Correction, Mistakes and Errors

Could it be true that until school appears during the life of a learner, there has not been a programmed emphasis for external correction of mistakes? This question portrays a crucial issue that was a product of most of the interviews. Making mistakes is a natural part of the process of learning and they will

correct with time. Correcting the learner from sources external to him, besides having a negative effect on his motivation and participation does not insure that learning is going to happen. We need also to question the concept of correctness of a particular item being developed. Why a given answer does not meet the criteria? How close it is from the criteria? Can the learner find the criteria by himself?

7. Society in Power, Politics and Attitudes

Almost all the interviewees agreed with the notion that the need for bilingual education has been created by the attitudes of the dominant segment of society. Only recently, the idea that there is richness in differences (cultural pluralism) has started to operate. Society, as part of the goals of bilingual education should be made aware that this not just compensatory education, it is a neglected alternative that has a tremendous national value as well as implications for the learner. It is not taking away positiveness, it is adding to education. Al bilingual situations in the United States will be cominations of two languages where English is the common denominator. The idea of "as a second language" should be transformed into "another language." Work also needs to be done with the actual or perceived status of languages other than English in the United States. Bilingual communities offer a more meaningful and efficient laboratory for learners of other languages than the usually static exposure of a classroom or even worse, an artifical language laboratory. Convenient interpretations based upon standardization

of experience and outcomes makes us blind to difference between migrant, dispossessed, and outcast persons.

8. Interaction and Learning

There must have been a purpose for the invention of language. Obviously, the purpose was not to learn it in school. It should not be surprising that most of the interviewees focused on the idea of maximizing interactions within and between students, teachers in the school, and the rest of society's teachers. Traditionally, the type of interaction provided in classroom situations have been passive compared with the potential of the new idea. The bilingual model should provide for interaction on a planned and actual knowledge basis. The specific peculiarities of a given language community need to be studied as part of the program, used and "changed" if desirable, possible and acceptable.

9. Language, Family and Community

It was understood that the family and community should be seen as learners and supporters of the program. There are some peculiarities of a community such as; the status of languages (perceived or real), institutions, type and use of media, mobility within and from, that are more meaningful for generating change than the usual advisory boards, agendas and minutes. The program should learn from these (in contrast to what books say about them) and work with them with domestically developed activities (in contrast to "universal" community programs who impose styles and outcomes rather than develop them). Some suggestions follow:

a) Work on activities aimed at discovering the family's perception of things like education, bilingual education, their children's capacity. Find some of the reasons for that perception and prepare necessary activities for changing what is agreed upon, and assess effect.

b) Prepare a program for parents aimed at using their skills and interests. Start by investigating skills and interests, develop a program for using them, observe and analyze related skills and interests for expansion and production.

c) Using a given segment of a social network (this concept will be elaborated later) provide information about and receive feedback on bilingual eduacation.

10. Schools

Not surprisingly at this point, school was seen as a minor part in the process of education. Education is affected by a cluster of factors, most of them left to operate "on their own" as a neglection in educational planning. It is not strange to see that what has happened to "compensatory" education programs can be partly attributed to this neglection. Some educational administration have even become so insensitive as to equate innovative and change with amount of money spent in what they call new programs. The section of this report dealing with Bilingualism, Culture and Social Networks will deal with alternatives to the problem. Interviewees added some comments:

a) Child learns more outside of school.

b) Schools are biased in favor of "scholar."

c) An environment aimed at maximizing the learner's participation should be prepared by the school. The staff

has to develop an awareness of the need for the type of environment; as well as the rationale for it.

e) Student selection should be based on interests rather than things like I.Q.

f) There is no specific way of grouping students. The criteria for doing so should be developed based upon the purposes, feasibility and experiencial knowledge about given situations.

11. Sociological issues related to learning should be the basis for the development of models. Most persons agreed that national models will not provide any answer, especially if they are standardized. Ultimately, they have to be adaptable to local communities. In other words what the school wants to achieve need to take into consideration the perceptions of the relevanat community. A process oriented model aimed at restoring power in learning to the students, the teacher in the school, and the significant adults to the learners should be developed.

12. Strategies: Curriculum and Materials

There should be an effort to prepare a curriculum based on maximizing interrelations between subject matter in a context meaningful to the learner. This will include the instructional materials. Some ideas are:

a) View literature as a unitary system. It should start from modern one and then go backwards.

b) Cultural content should not happen in artificial chunks.

c) The realities of learning should go beyond mathematics, science, English, Spanish, etc. They also are learning to live,

to grow, to intergrate, to discriminate, etc. Teachers should view themselves as learners and convey the idea to the students.

d) The language which the learner is more proficient in, and comfortable with should be used in the learning of most academic areas.

e) Curriculum should establish a continuity between "formal" and "informal education."

f) Book approach to learning should be minimized.

g) Library should have comparable quantities of materials in both languages.

APPENDIX E

SUMMARY OF THE RESULTS

Procedures of Data Analysis: Proposals

The proposals sampled represented a wide variety of thoughts, beliefs and approaches toward bilingual education. A common form of reference was required in order to integrate the diverse ideas presented. The same questionnaire used for the interviews was adopted to standardize the analysis of the proposals and to classify the pertinent theoretical and practical viewpoints found in the proposals. Pertinent statements were weighed according to the frequency in which they appeared in the proposals sampled.

Two experienced research assistants were hired to read and outlined the salient viewpoints stated, implied, or inferred in the proposals. These statements were listed on index cards with the source references indicated. The research team decided the usefulness of the statements and classified them into different categories. The statements were listed by categories and tallied by frequency of occurrence. The statements were reordered with the most frequent statement heading the list. The frequency loadings, however, should not be considered as absolute but relative values, indicating the support each statement has compared to others. In reporting the analysis of the results, some statements within a category were grouped into sub-categories according to their nature and characteristics.

Results of Analysis

1. Rationales or needs found for Bilingual Programs

The following rationales or needs identified from the proposals studied are presented in order of frequency. Under each of the three major rationales (or needs), the cluster of statements most frequently mentioned are listed. Since the rationales are ordered, the statements under the "motivation"

rationale are actually those which appeared less frequently in the proposals.

To remove the deficiency in language skills caused by:

1) Fructration in cultural identity

2) Negative self-concept

3) Lack of early visual-verbal training

4) Unrealistic curriculum for bilingual children

To reduce the inappropriate psycho-social preparation:

5) Variation in different cognitive styles

6) Inadequate evaluation devices

7) Speaking of non-standard Spanish

8) Deprived environment for second language learning

To overcome the problem of lack of motivation:

9) The variation in social-class levels

10) Differences in socialization processes

11) The lack of certain capacity, such as verbal comprehension, etc.

2. Project Goals

The goals for bilingual programs are listed in terms of the frequency in which they appeared in the proposals studied.

Most frequently stated goals:

1) Achieving full competence in both languages

2) Recognization of and respect of both cultures

3) Full development in cognitive abilities.

4) Development of positive self concept.

5) Community support and involvement in bilingual activities.

Frequently stated goals:

6) Providing early training in the use of both languages

7) Facilitating cultural or sub-cultural affiliation.

8) Development of bilingual teaching staff.

9) Development of bilingual curriculum materials.

10) Building home-school relationship and continuation.

11) Establishing standard Spanish.

Less frequently stated goals:

12) Establishing a prototype bilingual model

13) Building a self-reward system as a base for intrinsic motivation.

14) Permitting more peer group activities and social interaction.

Less frequently stated goals:

15) Allowing students to maximize academic growth.

16) Adjusting learning to different cognitive styles.

17) Developing specific cognitive or vocational skills.

18) Reduction of drop-out rate.

19) Eliminating alientation and frustration in learning.

20) Providing a rich environment for language learning.

21) Providing language program for Anglo students.

3. Instructional Programs

The types of instructional programs are listed below in the order of the frequency in which they were found in the proposals studied:

1) English reading or reading readiness.

2) Spanish reading or reading readiness.

3) Math

4) E S L

Frequently implemented:

5) Social Studies / Cultural heritage.

6) S S L

7) Language Art in Spanish

8) Language Art in English

Less frequently implemented:

9) Science / natural studies

10) Specific cognitive skills - classification

11) Motor or motor-related skills

4. Curriculum Materials

More proposals called for the adoption of existing or commercially available materials rather than development of materials themselves.

The use of toys, game-like kits, manipulating and concrete objects, and audio/visual equipments as supplementary teaching materials seemed to gain increasing currency in most proposals.

The adoption of curriculum materials developed on the basis of specific theories such as Piaget or Montessori were seen in a few proposals.

5. Presentation Process

The activity-oriented process, learning by real experience, audio/visual approach, and question-response drill received the highest frequency. Observing or discovery technique, programmed instruction, and individualized instruction were next in frequency of occurance. Very rare were the purely show-and-tell or lecturing process, improvisation, and translation methods.

6. Grouping Pattern

The most prominent procedure proposed was to group students in terms of language dominance. Mixed grouping in learning

certain content areas was also very common.

The individualized approach in a mixed group situation was planned for in some proposals. Non-graded, cross-aged grouping, open-classroom, grouping by ethnic background were rarely proposed.

7. Teaching Goals

Short-term specific behavioral goals prepared for each subject areas were stated in most proposals. General goals given in broad terms were prepared by some. Concept goals in terms of abstract cognitive activities were mentioned in a few proposals.

8. Language as a Vehicle of Instruction

For concept learning in the bilingual education, the use of two languages conjunctively were equally advocated with slightly higher frequency score in favor or the former. Unanimous agreement on the inclusion of native language for concept learning was found among the proposals reviewed.

For ESL or SSL programs, the target language were used as the vehicle for second language instruction.

9. Time Distribution in the Use of the Two Languages

An equal division of the total instructional time for the use of the two languages was most often favored for language learning. Using one language for a large part of instruction in the beginning of the program and gradually approaching the 50%-50% distribution of time was the common practice suggested in a number of proposals.

More emphasis was always placed on the use of the native language for concept learning. For those who favored the use of both languages on an equal basis, many different forms were proposed,

using one reinforcing the other, paralelling one with the other, or switching the two in certain areas, etc.

More time was allocated to the use of native language for cultural learning in most proposals.

10. Theoretical Position on Language Competency

A widespread claim found in most proposals was that retardation in the development of language competency and conceptual ability is due to unique environmental and experiential factors.

11. Influential Factors in Language Learning

A great number of proposals mainted that age was a crucial factor to account for one's language development. The earlier the child begins, the more advantages he would have.

Social class, practice, personal experience, and motivation made the second group of factors influencing language learning. The relative importance of these factors in terms of frequency was in the same order as they are listed.

12. Theoretical Position on Motivation

One fourth of the proposals indicated that positive intrinsic motivation in the forms of successful experience, self-confidence, and knowledge of fundamental use of the languages, was important to enhance learning levels. Another fourth proposed that positive extrinsic motivation in the forms of immediate reinforcement, praise, verbal interaction was necessary to improve academic learning.

One half of the proposals stated that self-esteem is enhanced by identifying with the Spanish-speaking teacher. The use of the native language provides motivation for higher academic

success.

About one half of the proposals recognized that parents' acceptance and participation in the bilingual activities and programs provides an encouragement and motivation for students.

A few proposals suggested that teacher's concern, enriched environment, and meeting students' needs would increase children's interest in learning.

13. Theoretical Position on Practice in Language Learning

About one third of the projects insisted that practice was important, especially in the phonological aspects of language learning.

Practice of sentence patterns in language acquisition was advocated by almost half of the projects as major technique in the implementation of ESL or SSL programs. Practice with reward was recognized in some proposals as an improved educational procedure.

In a few proposals, natural contact and group interaction plus the arrangement of meaningful learning situations in the teaching process was proposed as a means of encouraging language use.

14. Theoretical Position on Understanding

The methods proposed to make students' understand what they learn were classified into two categories:

1) The practical-inductive approach which refers to the audio/bilingual, action-oriented, or drill type of presentations which demand a number practice in the particulars in order to arrive at some rules or conclusions.

2) The cognitive-deductive approach which refers to transformational insightful, assimilative methods of learning which demand a number practice in the particulars in order to arrive at some rules or conclusions. The cognitive-deductive approach refers to transformation, insightful, assimilative methods of learning which demand the ability to generalize rules and principles from broad observation and discovery of the regularities and changes in a variety of situations.

The practical-inductive approach was most frequently mentioned in the proposals studied.

15. Transfer of Learning of the Two Languages

Except one or two proposals which assume no transfer or negative transfer of learning between two languages, all projects implied the possibility of positive transfer indicating that the learning of one language would facilitiate the learning of another.

In the areas of concept learning, the notion that the concept developed in either language can be switched to the other language subsequently could be inferred in all proposals reviewed.

16. The Relationship Between Language and Thought

About one fourth of the proposals held the position that interdependence exists in the development of language and thought. However, the other three fourths made no comment on this topic, so that their position was not clear.

17. Language Skills: Listening, Speaking, Reading, Writing

Development of all four language skills in both languages was advocated in almost all proposals. Only one took the monoliterate

approach and restricted the development of the skills in their native language to listening and speaking ability.

18. Goals for Bicultural Education

The review of proposals identified four major goals for bicultural education. These were:

a) Recognition and understanding of the cultural content and values of both cultures

b) Developing respect for and pride in the two cultures through the introduction of special cultural heritage programs

c) Maintainence of the values and elements of one's own culture through or emphasis of cultural or sub-cultural affiliations.

d) The attainment of cultural democracy (one proposal only)

19. Approaches for Language Development

More support was found in the proposals for the audio-lingual approach than for the generative (transformational) approach The audio-lingual approach included pattern practice , contrastive methods and imitation procedures. The generative approach was presented as a self-corrective process whereby increased exposu and natural development led to more group interaction among teachers and peers.

20. Teacher Training Program

On-going training programs were much more favored as compared to the short-term intensive training programs.

Programs focusing on teaching techniques were most frequently proposed, particularly for the ESSL or SSL programs. Supported equally frequently were the cultural sensitivity training programs to increase awareness of and sensitivity to what should be in a cultural program. Other teacher training programs emphasized team-teaching, program instruction, curriculum preparation, or special teaching methods based on a variety of learning theories.

21. Parent Involvement Programs

Proposals frequently suggested that parents or community members become involved in advisory committee meetings, disseminating information, and in cultural orientation programs. Home-school continuation programs, adult education programs, bilingual activity planning programs were outlined in some proposals.

22. Project Evaluation

Summative evaluation based on the assessment of the year-end product was provided for in almost all proposals. Formative evaluation focusing on the process of program implementation and development carried out by internal evaluators was advocated in about one third of the proposals.

Standardized tests were more frequently proposed in the evaluation designs than the self-developed measurements even though some projects might include both types of instruments for the purpose of evaluation. However, for special purposes and unique situations, locally developed measuring instruments were proposed.

APPENDIX E

Literature Review - Procedure

Initially, the research team collected extensive bibliographical data related to bilingual education. From these data, the team selected articles and books deemed most essential to the review. Readings further identified literature specifically relevant to bilingual education. In addition, interviewees recommended other important sources.

Two members of the research team devoted four weeks to a comprehensive review of literature relevant to bilingual education. Selections were closely reviewed and summarized on 5x8 index cards. Summaries were further analyzed by domain so that points identified as relevant to specific domain were categorized on separate index cards. Each variable, as it affected each domain, was put on a separate card. As evidence which supported or related to each variable was compiled from other summaries, the points were made on that variable's 5x8 card. This systematized procedure provided an index card for each variable affecting each domain. The information analyzed by each of the two team members was then synthesized in terms of the major theories and thrusts for inclusion in the final written review of the literature. Feedback on the findings from the literature was also provided to the team at week-end staff meetings.

Division of Focus

Since 1930, literature on first and second language acquisition indicates that most theoreticians and practitioners are in basic agreement on the factors affecting language acquisition and development; what follows is a discussion of these factors

within predetermined contexts. When appropriate, the univerals upon which some of these factors are based are further discussed. Progressing from the premise established by Anders, Gaarder, and others of the desirability of bilingualism for the individual (i.e. the monlingual English, monolingual Spanish, and bilingual child) as well as for the nation, we begin to see emerge within the realm of language two major groups whose goals and needs are different. They are the Spanish native language children and the English native language children. In determining the best approach or approaches to meet the needs of both groups, two major goals related to language must be established and analyzed in terms of their implications for the groups being affected. These are:

1) Native language acquisition and development; and

2) Other language acquisition and development.

Additionally, there are areas of concern which have implications for both groups. These will be examined separately.

Factors Effecting Native Language Development

In examining the factors which affect native language development, few universals but many variables have been identified. The variables account for degrees of proficiency levels in native language skills development. Research indicates that a child achieves command of the basic grammatical system of his mother tongue by the age of five. Studies also support the fact that children learn best through their native language.

Some psychologists described the ages between five and seven as critical to language development. In that age span the

child's use of language accelerates and words become a medium of learning and problem solving. Another factor determining differences in native language maintenance or development is the extent of education the child receives in his native language.

The process by which language is acquired and developed begins with the parent or parent substitute as a language model for the child. Whether the process of language learning is behavioristic or cognitive in nature or a combination of both has not been decisively determined. However, both schools of thought accede to practice as playing a role in language development. Observation of children reinforces the position that children initially use content words and subsequently add function words in the process of sentence formation.

There is general agreement in the literature that parents and the environment play an important role in children's language acquisition. Recently, the environment has been extended to its broader context of society and culture. The interrelationship of society and culture has received great importance in the formation of language within the newer discipline of socio-linguistics. The community's role in the process of language acquisition has taken on a new perspective as researchers examine the linguistic features of communities.

The major goals identified in bilingual language maintenance programs are the development of literacy in one's native language and cultural pride within that language. These major goals are implied in Leonard Bloomfield's Language (1933), in which he indicates the possible gains if children of foreign

language background were to "study the language they heard at home."

Factors Affecting the Acquisition of another Language

The international scene, particularly the world wars and the launching of Sputnik, created a "new awareness" in foreign language teaching in the United States. Studies manifest a definite "shift", of goals in foreign language acquisition. The stress is now placed on communicative competence. [not just in ESL but in other languages as well and from a composed system to a coordinate system of teaching]

The review of the literature also shows that the degree to which the native language is mastered strongly affects the acquisition of another language. Factors critical to the learning of another language are:

1) The situation in which the language is introduced and learned, i.e. permissive or forced

2) The use to which the language is put or as Gumperz states "under conditions of maximal contextual reinforcement;" and

3) The frequency of use of the second language.

4) The attitude toward the language being learned

5) The age at which the target language is introduced.

The successful language learner is described as the child who takes an active part in the process of acquisition. "Take care of function of language and structure will follow." -- Cazden. Many researchers prefer early introduction of a second

language, i.e. even before five years of age.

Others place a ceiling on age for effective language mastery during adolesence. Support for introducting language at an early age has been received from many disciplines based on physical, psychological, neurological, social, political, and economic determinants.

For the two levels of language acquisition, the receptive and the productive, training is required. As stated before, environmental factors play a major role in language learning. Children can gain control and eventual mastery of a new language through contextual practice. Adult/child interaction in the home and the community and peer group interaction in the school and the playground provide learning situations wherein individuals must relate to each other and to a given situation through the vehicle of language communication. Therefore, in planning a meaningful second language program, knowledge of the sociolinguistic features of the community is essential.

Implications of Findings for School Organization

Factors identified or relevant to native and another language acquisition and development must be considered by schools if they are to achieve desirable goals in bilingual education. Such factors relate directly to curriculum, method materials, teacher selection and teacher training. Therefore, the entire school system must be viewed in terms of "change." The literature revealed that two factors to be considered in the implementation of a program for acquisition of another language are time alloted to second language instruction and the method of introduction to a second language. Time factors determine whether the second language is introduced gradually receives equal time as the native language or is introduced almost exclusive of the native language, i.e., immersion. Several researchers support consistent separation of language systems by introducing and reinforcing languages through separate stimuli. Most reseachers noted that linguistic mixing by the same individual leads to confusion and retardation in language development. That a positive relationship between language learning and need evokes a communication approach to the introduction of language suggests that language then becomes a vehicle for communication and not merely a subject to be studied. Studies also indicate that the approach to second language learning which has been used with adults cannot be used with younger children. Different instructional techniques are needed. The literature reveals that

reading skills in a second language were best developed when a young child learned to read initially in his native language. An extension of that theory is that a child learning to read in a new language should first understand and be able to say what he is to read. Lado (1972) found that early introduction to reading enhances native language development in young children. Simultaneous introduction of speaking and reading a second language positiv ely affected language development in older children and adults who knew how to read in their first language.

Teaching content subjects in the mother tongue was found to facilitate understanding and native language development. Teaching content in the weaker language was seen as a tool in language acquisition by engaging the child's capacity for natural unconscious language learning. However, it was noted to the knowledge of subject matter and the child's facility in problem solving.

Native-like command of the language of instruction was determined essential if natural use of that language was to serve as a model for children. Some researchers believe that a good language model is a native speaker who has received academic preparation and experience through that medium. Peers were also seen as influential partners in the teaching process, implying for language, linguistic mixing. Exclusive use of materials from other countries or exclusive use of culturally irrelevant materials from the United States was found to divorce the school from the reality of the child's linguistic home and community.

Concept Development

The educational literature of the past decade reflects the influence of Piaget, Vygotsky and other cognitive theorists. The psychological position that the origin of thought is distinct from language and that linguistic processes are not the complete substance of cognition is supported by many psychologists, linguistics, educators and others.

Based on the assumption that language does not constitute intelligence, nor create it, but that each is a dependent partner in the development of intellectual processes, the emphasis in educational theory is shifting. The approach that education should be a process which encourages and maximizes the many complex aspects of intellectual and attitudinal development in children.

The suggestions for implementing this approach include more imaginative and experiential activities. To discover and explore, to relate and enjoy are far more characteristic of the learning process within the cognitive oriented school experience, with or without classroom walls. The assumption is that enriching experiences will provide the child with the opportunity to develop and pursue "meaningful knowledge." The focus changes from the teacher and methods to the learner and activities.

Prior to the 1960's, educational literature reflected the position that language is intelligence, that knowledge consists of the accumulation of information and the ability to verbalize within the context of the educational establishment. Today, the

schools reflect this attitude with their content-oriented approach, the use of tests to determine deficiencies in the absorption of this subject matter and tests to determine intelligence.

The assumptions about languages derived from the above stated position are illustrated by the concentration of psychologists on the effect of a second language on intelligence. The assumption is that the acquisition of language other than one's own can "harm" intelligence, or that it is a "burden" for the mind to bear, especially for the young. Leon Jacobicz maintains that the pursuit of "scientific" validation of bilingualism is a cultural phenomena in America. Throughout Europe or among the wealthy classes throughout the world, bilingualism is regarded as a natural process or a distinctive status symbol.

Literature abounds with many conflicting studies attempting to measure the intelligence of bilinguals or to establish the relationship between bilingualism and intelligence. Natalia Darcy and Vernon Jensen summarized all the available studies with their divergent claims for and against bilingualism. The final summary is that available data does not provide any significant conclusions. The tests and conditions of testing are questionable. Psycholinguists generally agree that most of the tests do not take into consideration all the relevant variables and, in particular, no one has isolated bilingualism as such, assuming that this is possible.

Some studies made of Spanish-speaking children illustrate that bilinguals perform better on non-verbal tests than on

verbal ones when their knowledge of the language used is limited. Limited knowledge of the language and not the intelligence of children is usually a determining factor in the various tests which are attempting to measure bilingualism. One of the most recent studies, the St. Lamber's experiment, concludes that bilingualism can result in greater cognitive flexibility. This too is questionable.

A common factor found in the review of the literature, observations of bilingual programs, and in some formal evaluations was that children are learning not only both languages but subject matter in both languages.

Affective Development

The literature reviewed supports the position that the attitudes of a child towards his language and social context are of critical importance in his intellectual and affective development. His sense of security and identity are strongly influenced by external factors which either encourage or discourage the use of his language which reflects all that he is and has accomplished, especially in his early years.

A value is reflected by the utilization or prohibition of his language in the school situation. Rejection of his language contributes to the development of a negative self-image and restricts a child's learning potential which further inhibits his sense of self. A rejection of his language can have an insidious affect on a child's relationship with his family and community. Children are particularly sensitive and vulnerable in

their formative years. Therefore, the school should provide them with a feeling of personal security and reinforce their relationship with the other dominant influences in their life, their family and community. The literature is replete with accounts of the tensions caused by a language policy in the schools which has led to feelings of inferiority, humiliation and denigration. Though specific psychological studies have not been conducted to demonstrate the relationship between language and self-concept, many experts agree that accurate observation and common sense confirm the interaction discussed.

There is almost complete agreement that the utilization of the child's vernacular enables the child to learn. This single factor has tremendous implications for affective development. The school experience can provide the child with a feeling and foundation of achievement instead of failure and frustration. Instead of being regarded as someone with a language problem or a language handicap, the child should be viewed as having a language, his own language. The school then builds on the learning readiness which the child brings to school. Freed from complete dependence on learning another language before he can begin to learn anything else, the child can actively participate in the development of cognitive skills in his native language while he learns another language.

He will be using his language positively and he will be enjoying happy learning experiences rather than academic frustrations. This encouraging atmosphere and individual accomplishment

provides intrinsic motivation as the child's self-expectations are created and reinforced by his sense of pride and the reality of his achievement.

Based upon the univeral conclusion that in the early years a child's acquisition of language is a major intellectual achievement, there is strong support in the literature for the view that this is a positive achievement no matter what the externals of that language sound like. Within the present educational system, the focus has been on the degree of deviation from an accepted standard of English or once again the "language handicap" of the student. This negative approach toward the child's language, be it a Spanish, English or other, affects the child's value context.

According to some experts, it is the school's inability to understand socio-linguistic differences which result in negative attitudes that influence the child and affects his emotional and intellectual development. The above discussion relates to the child who speaks a foreign language as well as to the child who speaks a different form of that language or who speaks non-standard English. Socio-linguists do not suggest the retention of these communicative variations but their utilization and eventual transition.

Most educational theorists agree that the school should begin where the child is and should consider the language a considerable feat. If this approach has an impact on the educational process, significant changes would result in the attitudes of teachers and the "establishment" towards the child as a

learner and in turn be reflected in the child's affective development.

Within the context of what has been discussed previously, the failure of the child in the present educational system has been attributed to the child's difficulty in learning English. If he is consistently exposed to the idea in his school and community that English or another language is difficult, that there are tremendous obstacles in acquiring the necessary skills, he will react accordingly. Again the expectations of the child and teacher have tremendous influence on the child's learning ability.

Studies indicate that the way to communicate for personal, social and economic reasons constitutes an important factor in the successful learning of a language. If a child feels, consciously, that the language has value for him, that it will provide him with certain benefits, he will be more responsive in the learning process. When a family moves to a foreign country, children very quickly learn to communicate with their peer group or they would have no friends. If the language is viewed as difficult and represents a hostile community, a child will have little incentive to acquire it.

Beyond the atmosphere in school, societal factors affect a child's self-concept and expectations. Respect for the child's language and community is essential in all aspects of his interaction with his environment. If society at large reflects a prejudicial attitude, the child will feel rejected and alienated. Instead of creating an atmosphere of cultural

appreciation and mutual understanding, cultural differences have been viewed as deficiencies. Such negative views create tensions which undermine the sense of confidence, security and importance of culturally different people.

APPENDIX F

CULTURE AND SOCIETY
IMPLICATIONS FOR BI-LINGUAL EDUCATION PROGRAMS

HERVE VARENNE, Ph.D.
Teachers College, Columbia University

In 1952, two seasoned American cultural anthropologists, A.L. Kroeber and Clyde Kluckhohn, reviewed the definitions of culture currently used by themselves and their fellow anthropologists, the relationship of these definitions to what scholars in the discipline were doing, and finally the relationship between the definitions and usages and any empirical evidence that would demonstrate beyond a doubt that the concept referred to something specific. They wondered whether it was an event or an aspect of an event susceptible of analysis and about which scholarly discourse could be instituted, or whether it was simply a catch-all word for the miscellaneous pieces of data which a different, for example social structural, analysis could not deal with or, at most, whether the only value of the concept was to serve as a label for general human behavior -- by opposition to animal for example -- but a misleading label because it covered no reality. Such an experienced anthropologist as Radcliffe-Brown thus argued (1940) that it was better to drop the term because he had never observed any phenomena that could be called "cultural." The other usage was simply a repetition of the original definition of culture given by Tylor in 1971:

> Culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society. (1958:1)

Like all other anthropologists after him, Tylor used the word in the title of his book and the first sentence of the first chapter, and then never referred to it again as he went on to talk in details about each of the thing which he had listed as being "part of the whole." The studies of "the parts" thus developed very fast as scholars were confronted with bounded domains which they could observe analyze. But the whole escaped them and they came to doubt in its existence.

Yet, at the same time, another group of anthropologists, people like Ruth Benedict, Margaret Mead, Gregory Bateson, etc. had been working on sets of phenomena which could not be explained by reference to the concepts most influential at the time, particularly that of social structure. Benedict showed (1934) that different groups of humans emphasized and rewarded different types of personality traits. M. Mead showed how these things were transmitted to the young of the species through learning processes and that a large aspect of human behavior was neither socially nor genetically determined. Indeed the founding fathers of modern social science, Durkheim, Marx, Weber had spoken about such things as "collective consciousness", "ideology", "the spirit of capitalism", concepts that emphasize the importance of attitudes, interpretations, ideas for an understanding of human behavior. Some sociologists believed for a while that those ideas, because they were not measurable, because they often were not directly related to what an observer could report, because they were not "real" in that sense, could not be a phenomenon sui generis, but were only derivative of

other forces, real, measurable forces of which the people might not be aware but which were still the primary determinant of their behavior. This position was indeed reinforced by passages within all of these original works.

Yet, research in that direction was not as productive as far as an explanation of ideas was concerned as it had been expected and when Talcott Parsons started to develop his "general theory of action" he felt it was necessary to include the concept of culture which he defined as the system of values which a certain society had.

That statement was made in 1951, the year before Kroeber and Kluckhohn's review, and it served as the theoretical justification for a recognition of the concept of culture from a very different point of view from that which they criticized. It is this new definition of the concept, its meaning, implications for further research and applied programs which we shall discuss in here. If I started with a short exposition of what culture is not, i.e. a list of random traits unrelated among themselves, it is not simply because of an irrelevant interest in intellectual history, but because this view is still current, not only among laymen, but also among certain anthropologists, even among the most influential. In the same way as the idea that culture was a system, and that it dealt with intellectual objects, can be traced far back, before it became consciously integrated into a general theory in the same way the previous theoretical "paradigm", to use T. Kuhn's word (1962), continued to attract many sociologists and anthropologists. The following will thus consist, first of a theoretical discussion of the concept of culture and its relationship to other aspects of human

behavior; I shall then try to show in a little more detail some of the consequences of the general theory to the problem of bilingual education for the ethnic minorities in the United States. A general knowledge of human behavior in society and culture can only offer a picture of the general structure into which one can expect the empirical situation to fall.

I

The central point of modern theories of culture is not precisely that culture is "values", so that the researcher has to do is just to ask around, identify those values and list them. As we shall see, whether the concept of values is the most useful can be subjected to questioning. The central point, the present paradigm, is that culture is a system of whatever it is it consists of and not a list of traits. The idea that culture was concerned with values, or choices, or emphases, and not with the shape of an utensil, is generally accepted. The idea that it is a system has to be stressed and explained in more details.

To take an example from the recent literature on poverty and variation in culture among various groups in the United States, the controversy between O. Lewis on the one hand and Valentine on the other centers on precisely the concept of culture as either a series of traits the presence or absence of Lewis which have certain implications for the development of other traits within that population. For example, if Puerto Rican have the "trait" of "low level of political organization" (1965:xlvii) they cannot succeed in a modern capitalistic and democratic society or culture because this trait is "necessary" for full participation. In consequence

many programs were created in the hope of instilling that one trait, or a series of traits into the poor to "remedy" the situation.

The essence of the criticism leveled by Valentine and other anthropologists on this interpretation of empirical findings was that it did not recognize the essential fact that a trait does not exist in a vacuum totally unrelated to other traits, but rather that the concept of "trait" itself was misleading in so far as no researcher observes a trait in itself, but rather a situation, a phenomenological or sociological point in time which is a whole, always much larger than the actor, or even the observer can grasp, and that the so-called traits are but abstraction created at the level of analysis. A methaphor was once used by a sociologist to exemplify what he thought society was, the metaphor of the organism, of the machine. But subsequent sociologists came to believe that society was indeed a machine, and that one could take it apart, just like a machine, and that the end product would be definable, distinct spare parts. They didn't realize practically that even a machine is a whole, that a spare part only appears to be an entity in itself while in fact its meaning can only derive from the whole in which it functions.

Culture and society are thus systems, and whatever traits one may wish to create to account for their functioning exist only in relation to the whole. But culture and society themselves are not entities in themselves, they are not distinct traits of human behavior, they are part of a larger structure that is human behavior, they are thus interrelated between each other and it always remain the

responsibility of the observer to define precisely the domain of human behavior which he happens to be studying or on which he thinks that his analysis or program will have the most effect. Thus, there are not such things as an "American culture", a "Puerto Rican sub-culture", a "social system" in themselves as independent entities. The boundaries of the particular system about which a researcher wants to make a statement are not natural phenomena which can be "discovered" through observation of an hypothetical "real world".

Let us take an example. It is said that, for Americans, a sign that a child is being respectful to an adult consists in his looking up to the adult. It is said that, among Puerto Ricans, respect in the same situation is expressed through a lowering of the eyes. It is further argued that the failure of Puerto Rican kids in white schools is greatly related to the fact that white teachers do not understand that a kid is being "really" respectful if he is looking down, and that he should not be punished because he doesn't know any better. The problem is thus couched in reference to the fact that one is confronted here with a text book example of lack of communication between cultures.

In the process one will probably disregard the fact that the kid spends many hours in school, that the teacher has been telling him many times that when she reprimands him he must look up. The teacher will argue that this means obstinancy and dumbness from the part of the kid, and the researcher will say that the teacher is ethnocentric, if not racist. The problem is the following: why didn't the kid "learn" the proper form of respect to be used when speaking to white persons? Puerto Ricans in other situations have been able to do it. This can lead us to a different interpretation

of the situation. We could hypothesize that the kid is behaving in an antagonizing manner to a white person because he knows that white persons are always antagonistic. Now many White Anglo-Saxon, or even Jewish, teachers are liberals who want to teach through "love" rather than through authority, thus they try to be "nice" to the kids, and thus disturb their personal cultural systems which says that White persons are not nice. They must thus force their White teacher to behave badly so that their system be in equilibrium again.

No set of empirical work can fully prove or disprove any of those two hypothesis. This is why we have to turn to theory and argue that the latter is more appropriate than the first because it takes account of more details of the situation in a systematic way. While the first interpretation presupposes the existence of two basically unrelated system, the second argues in favor of the idea that, given a ego -- the kid in our example -- ther can only be one total system for his behavior and that for him (assuming that he has been borne and raised in New York City) wealthy, well fed, domineering whites which are mostly not interested in poor, hungry, inferior feeling Puerto Rican kids are part of his system. The social worker, and the "special reading program for deprived children" and the welfare checks and the forms which his parents have to fill, are part of one system which, as all empirical research has done, is very "systematic" indeed in reinforcing the attitude which his parents have taught him because it represents best a valid interpretation of their life experience. Now, if one element in the system does not behave exactly as predicted by it, if a social worker or teacher behaves nicely this will probably not make much of a change because

of the conservative nature of systems, because of the phenomenon of homeostasis by which a system reacts to reject something foregin to itself and return to equilibrium.

Behavior in general, and culture and society in particular, must thus be considered systems, but what are they systems of? Once we have accepted the idea that culture or society do not exist as distinct entities at the level of behavior, that they are analytic constructs that exist properly only within the scientist mind, where do we go? What will be the focus of a cultural analysis rather than of a social analysis? We already know that old distinction between society being what "is" and that culture is what "is thought to be" is not valid because society does not exist outside of individuals and particular situations, as theoreticians have known since Durkheim. Conversely, culture "exists" and deals with "real behavior" in so far as anybody but the most narrow-minded will agree that men not only talk, but that they always talk about something, that they watch movies, read or compose novels and that the process is real even though the subject matter may not be. Similarly when travellers report that Americans are more brusque than Englishmen, they are not simply "expressing an opinion" as it is has been shown that Americans and Englishmen have different rules about the proper length of time that must occur between an exchange in a dialogue. This is measurable. On the other hand, this difference is relevant only in so far as both cultures agree that brusqueness, or non-brusqueness, in conversational tone is determined by interval of silence between exchanges, that both think that brusqueness is associated with short interval, informality, liberty, democracy and so on. We could say that Americans "value" short intervals, brusqueness, informality

and all the rest.

Here is where the concept of value can enter our discussion at a point where we can evaluate its meaning and limitations. We can see that to say that culture is a system of values held by a certain population is ~~true~~ enough but is not very useful from our analytical point of view because of the inability of researchers up to now to talk about values in a systemic, structural way. This may seem paradoxical, though we might say that the problem with values is that they don't deal with real events, with the analysis of these events but rather with a deduction which the analyst makes at the end of his study of a set of behavior. In the preceding example, our data were opinions, definitions, measurements, and it is only at the end that we said "if Americans do this it must be because they value it". What did we add to our analysis by doing that? Nothing much, except our feeling that somebody must like or value something to do it. This may or may not be true, our data certainly did not permit us to assume either that our informants like what they were doing, or that they didn't like it. What we could say is that they were behaving in such and such a way and that this form of behavior is associated with other behaviors, so that to be a "real American" one has to demonstrate all those things. The informants may say in the same breath that he "doesn't believe" in the relationship, that he wouldn't do such a thing, the important thing is that he knows the definitions, and he can transmit it to an interviewer or to his kids.

C. Geertz, in a series of articles on the cultural aspect of such things as religion and ideology (1963, 1966), thus argues

that culture is a model of behavior, a chart describing "the way the world is" to which one can refer in new situations or when an interference happens within the routine, and also a model for behavior, "the way the world should be", a set of guidelines for culture because it emphasizes, not only the systematic nature of culture, but also its complexity, something which the concept of "value" short-changes. It has indeed been proven to be a very fruitful definition in terms of further research and of the tying together of many other subdisciplines of anthropology who until then lacked a general framework.

By emphasizing that cultural phenomena can be interpreted as providing models of and for behavior we can tie culture to communication in general. A man like Sapir argued very early that language and culture were very closely interrelated, that they appeared to follow similar structural rules. Worf, Levi-Strauss all intuitively and programmatically continued to argue in favor of this interpretation. But for a long time they didn't go very far because cultural behavior was not being interpreted in the same way as linguistic behavior was. While structural analysis has carried linguistic very far, anthropologists still had difficulty just deciding what it was they should describe, and they certainly couldn't analyze their data in a sophisticated way. The situation appears to be changing now. Culture provides a way by which man order his substantive interactions with others. If we say that language provides the abstract media through which information can be exchanged, we can also say that culture provides the pattern for that information itself. In the same way as language cannot be random but must be structured for people to understand each other, it is not enough, the information

that is passed must also be structured within a system of meanings and definitions which is culture. Today "I am hot", analytically, does not refer to a fact of nature, but rather to the culturally-bounded opposition between hot and cold, a boundary that is fixed to 70-75 degrees F. when one refers to human beings, but may be much higher if one refers to something like soup which, in our culture will only be referred to as "hot" if it is more than 150 degrees. Thus we cannot understand hot, cold, brusqueness or liberty by reference to a reality "out there", in the same way as there is no relationship between "dog" and the animal which the French call "chien". To understand those concepts one must investigate the meaning they have for the particular population that uses them.

To say that culture is an aspect, or a level of communication, implies certain other things that will be relevant later on. First, culture is a group phenomenon, i.e. it is imposed from the outside to the individual. This is why one can talk about culture or a culture as if it were something in itself. This does not imply a belief in an hypothetical collectivity. Secondly, because culture is carried by individuals, one cannot expect to make statements that will be valid for all individuals within a certain cultural area. In the same way as all individuals have a slightly different dialect of the language they speak, all individuals have a slightly different culture or subcultures. Class or group subcultures develop when communication becomes prevalent between certain types of people who share a similar experience, or communication with other groups exists on a regular basis exists, when the two groups come to be defined as having

different beliefs or modes of life which distinguishes between themselves. This is of course what seems to be happening in the United States and our example of the Puerto Rican kid and his teacher fits under this structure.

Culture is thus an aspect of communication processes. Society has to do with the physical consequences of maintaining a large group of people within a given territory given a certain set of cultural definitions. Given a society such as the United States with its emphasis on "freedom of the individual to do what he likes", there must be mechanisms by which it is assured that the proper contingent of people will man all the infinitely various trades that must work together for the society to function. At another level, one can also show that, given the industrial nature of our society, there are such social constraints that two such societies as the United States and Russia may be very similar from a social point of view even though their culture may be very different. Similarly, given the cultural idea that, in America same congregate mostly with same, sub-groups become established that interact mostly between each other, which will have the social consequence of limiting communication and thus creating a distinct sub-culture where none was defined as existing before. This new difference will probably become culturally recognized very soon, yet the two processes are different and must be analytically distinguished.

It is thus possible to study an aspect of the social system by itself without references to the communication processes which have influenced its present form and that continue to allow its survival. Given the needs for superhighways and sewer systems, one can study either the processes by which the need for either is recognized by the proper authorities, how the resources are gathered

and how the actual work is organized. One can also study micro-processes at the level of the board of directors of the project or of one of the gangs of workers.

It is probably not really necessary to go more deeply into the nature of social processes in so far as we are all professionally more aware of their importance and place than we are of cultural processes. One must simply remember that these social processes are organised into systems and structures the ramifications of which may go far beyond what we are intuitively aware of. Then, of course, it must be stressed that neither society nor culture are primary to each other so that we could say that one "derives" from the other. What "exists", from our point of view is "human behavior", the fact that the human species can only survive through gregariousness, or society, that for a society to exist, be it of ants, mice or men, there must be communication between the individuals of the species, and that in men modes of communications are not genetically defined (though the structure of these modes may very well be as Chomsky argues). The process of analysis of human behavior thus implies that the social and cultural realities be taken into account since it is useless to have made a brilliant analysis of the social system and then couch it in a language which the audience to which it is addressed cannot understand. It is also useless to convince a group of persons to learn a new culture, new sets of relationships between concepts of there is no social way through which they can put those into practice in their daily life.

Let us summarize my argument through an exemplary case. Let us imagine the following event: a young child runs across the street in front of a car, the car screeches to a halt a few inches from the child who runs to his mother on the other side of the street, who hugs him and then slap him. A novelist may be walking by and decide

to write a short story about event. He will be involved in a communication processes which will probably involve his making reference to the fact that young kids "are bound to run around fearless of the possible danger to their life", "that drivers of cars often forget their responsibility when they get behind the wheel and will drive recklessly", that "when mothers have been afraid for their kids, they will often punish him in reaction." Whether all this is "true" or not is not the question. There was nothing in the situation that could make one decide whether young kids in general, or only this particular one, do such things as run across streets, or whether the car was going "too fast." The novelist must then recall his previous experiences and interpret the situation. His account itself will be the basis for further accounts of similar situations by other people. One could analyse the situation by pointing out that, considering how many kids, mothers, cars, streets, in the neighborhood where this particularly kid lives, considering the traffic laws, the organization of the driving situation, etc. it is statistically necessary that a certain number of kids will run across streets, and that some will be missed, and that some won't be. We can thus predict that, as long as the present social system is not significantly changed, approximately the same number of kids every year will be run over by cars.

The situation could also be studied from the point of view of the personality systems of the different persons involved. And the same type or structural argument could be made, but it would fall outside our topic here.

II

Applied social action is thus confronted with a much more

complex problem that has yet been totally recognized. (I shall be using the phrase "social action" to refer to action on the group aspect of human behavior which includes both the social and the cultural levels as we defined them in the preceding discussion). It is not enough to identify, through statistical means for example, that one variable is associated with another, to find a variable on which it is thought that action is possible, design a program to change that variable and then hope to see the other variable change concomitantly. Even if it is true that there are more fatherless families in poverty-stricken areas of the United States than in other areas, it does mean at all that either "broken families" foster poverty, or that poverty causes fathers to abandon their family. We would first have to define poverty and fatherless families in such a way that they can be considered as belonging to the same level of behavior, the social or the cultural --for they can be considered from both aspects --. We then would have to pursue an analysis of the total situation.

Bi-lingual education is confronted to similar problems if the programs are to be based on a scientific understanding of the situation. Such an understanding is not necessary in itself. The human species has evolved quite well because it is a system that will adapt and necessarity reject something that is not functional within itself. On the other hand, if one wants to be scientific, one has to base one's program on a theoretical basis first, and then on an analysis of the specific situation using concepts borrowed from the theory. The theory cannot predict the details fo the situation, only research specifically oriented towards dicovering those can do that.

Not being personally well acquainted with the social and cultural situation of Puerto-Ricans in New York City, I cannot pretend to begin such an analysis here. I can simply suggest a few things that I would hypothesize as being probably relevant. From a social point of view, it will have to be recognized that the Puerto-Ricans are not in any way an independent unit, that they are integral part of New York City as a whole and even of many aspects of the wider American society. Puerto-Ricans work for non-Puerto-Rican firms, they are subjected to laws and regulations that apply to other people than themselves. We can use as an example the fact that there is a need in New York City for unskilled persons to do such works as loading dish-washing machines in restaurants, at a more general level, capitalism demands a reserve of low paid, or even unemployed workers in order to regulate itself, it would thus appear evident that poverty may not be something that may be "eradicated" unless the total system is changed.

Culturally speaking, the Puerto-Ricans are not any more independent. It is not only that historically, American and Hispanic culture spring from the same sources, but also that people who live in the United States, even within a ghetto, are directly subjected to American culture, not only by employers, fellow workers, teachers, social workers, bureaucrats, but also by the mass media under all City and not know that there are "Americans" living in it and governing jobs, school and mass media, and who despise Puerto Ricans for their entrance to it. An individual Puerto-Rican may not be that verbal, but I am sure that the knowledge is present. Any program based on research must take all that into account. It must take into account particularly the image it itself will present to

the community, which does not consist solely of an effort from the part of the organizers to be "nice", but must also consist of an realization from their part of the image which any program has in the group.

Thus, an understanding of the culture of Puerto-Ricans in New York should not be limited to a research on "Puerto-Rican culture" per se, but also on the view Puerto-Ricans have of the wider American culture and also indeed perhaps of that culture itself. Let us hypothesize that Puerto-Ricans believe that Americans have control over their schools while they don't, and that they have been convinced that Americans are successful and rich because they have such control and that they are poor because they don't. They may even have come to believe that Americans are successful because they don't have "remedial programs", while the "real" purpose of remedial programs in ghetto areas is to foster poverty and thus should be sabotaged.

This may seem paradoxical from the point of view of liberal program designers with their "white man's burden" type image of themselves, and yet it would fit the total situation which Puerto-Ricans confront in American society and culture better than any other. The point is not so much to make Puerto-Ricans realize that there are good and bad whites, good and bad programs, but rather that they may know better than a non-participant observer the full implication of a certain set of behaviors that touch their lives more centrally.

If the hypothesis is close to the reality, two types of arguments could be made in favor of different programs. One could argue to the Puerto-Ricans that the Whites are not really free to do what they want, that control over their lives has had nothing to do over their success. This would be all the more difficult to do in so far

as most programs at present have been preaching self-help and individualism--even though they were most often organized in a bureaucratic, authoritarian, hand-out fashion-- and since the Whites would continue in believing in self-determination for themselves and talk about it on the air waves and the newspaper pages. Another program would consist in actually giving full control of the schools to the Puerto-Rican community, which might very well entails, in a first stage that could last a long time, a cessation of all outside directed projects and programs.

Such a proposal is probably unpractical in so far as New York City is not close to breaking apart into self-defining neighborhoods. All this is just intended to exemplify the type of holistic analysis which an applied program demands. It could very well be argued too that a very authoritarian type program of language acquisition might be better in the present case because it would be closer to the actual structural positions involved in our case. At the end of the program one might then aspect (1) people who would speak both Spanish and English very well; (2) revolutionaries.

Let us conclude by talking briefly about "bi-culturalism", at a theoretical level again since our incursions into empirical situations can only be hypothetical. Bi-culturalism was a concept derived from the concept of bi-lingualism. If languages and cultures were the same thing, it was argued, and since many people can speak two languages and be bi-lingual, it must be possible to "learn" a second culture and be bi-cultural. The problem is that whether it is easy to discover people who speak more than one language, multi-cultural people have been much more difficult to identify and study. The problem is probably that, though both language and culture belong to the

same domain of communication, they are not the same and their structure is different. Attempts at discovering the double articulation in cultures have thus always failed. It is thus possible that cultures are structured differently from languages and that the learning processes involved at different. From our theoretical discussion of the concept of the cultural, we can deduct that there should be two types of bi-culturalism. On the one hand you would have the person who has learned two sets of rules, of models and who could communicate as easily with people of two different cultures. This is precisely what anthropologists try to do. But this type of bi-culturalism is rarely relevant to an empirical situation. Bi-culturalism often refers to situations where one is not so much confronted to two cultures as to one culture internally organized into different groups defined as having different characteristics.

Once again, whether in a particular situation a particular person is better accounted to by reference to the first rather than the second type cannot be decided a priori but only after an empirical analysis. Thus a Puerto-Rican who has been borne and raised in Puerto Rico, and may be his first generation children, could be said to be closer to the first type--if he has somewhat adapted to the American culture of course, if he is confortable enough within it to succeed. On the other hand a Puerto-Rican in New York City who has lived there for a long period of time may be closer to the second type of bi-culturalism, in this case, the test would not be whether he is successful but whether his definition of the relationship between White and Puerto-Ricans is close to the definition of the same situation as given by White Americans.

In a narrow sense bi-culturalism should not be used to account for situations of the second type which are sub-cultural situations. If I have referred to both types here at the same time it is because the two are not readily distinguished in the literature on the subject of ethnicity in the United States.

APPENDIX G

RESEARCH TEAM

The following persons were responsible for the design and/or implementation of this study and/or preparation of this report.

Heidi Dulay
Ada Gonzalez
Jenaro Hoyos
Mary Jenkins
Pablo Navarro
Migdalia Romero de Ortiz
Luis Rivera
Ping Kee Siu
Richard Zusman

CONSULTANTS

The following persons served as consultants to the research team:

Marina K. Burt
Roslyn Ehrlich
Bruce A. Gaarder
Sister Maria Goretti
Appu Kuttan
Hernan La Fontaine
Linda Levine
Spencer McDonald
Merril Swain
Raquel Torres
Herve Varenne
Lee R. Wolfe

SUPPORTIVE SERVICES

Work related to or typing of the report was done by:

Mirna deJesus
Violet Figueroa
Francisca Malave
Pauline Ortega
Nancy Suarez